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QUADRENNIAL REPORT TO THE PRESIDENT ON THE ADEQUACY OF SPECIAL PAY FOR PHYSICIANS AND DENTISTS IN THE DEPARTMENT OF VETERANS AFFAIRS

COMMITTEE ON VETERANS' AFFAIRS
U.S. HOUSE OF REPRESENTATIVES

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FOREWORD

In 1975, this committee became very concerned about the ability of the veterans health care system to attract physicians and dentists. On its own initiative, the committee proposed the current structure of primary and incentive special pay for physicians and dentists. This action was clearly effective in enhancing recruitment and retention efforts.

In 1980—again on its own initiative—the Congress increased the maximum allowable special pay for physicians and dentists as part of public law 96-330. Since that time, since 1980, there have been no changes in physician and dentist special pay.

Public Law 99-576 required a report due not later than December 31, 1988, concerning the adequacy of pay for VA physicians and dentists. It further gave the Department an extra 2 years—from 2 to 4—to gather and analyze the appropriate information. Public Law 99-576 was enacted on October 28, 1986.

The Department's Chief Medical Director contracted for a background study on physician and dentist recruitment and retention and appointed an advisory committee on the subject. The task force met once, from March 13 to March 16, 1989, to discuss the findings of the study and to make recommendations to the Secretary. At this point the mandated report is nearly 3 months late. The Congress finally received the report on Monday, October 21, 1989. We understand that the Office of Management and Budget has not yet concurred in the recommendations of the Department.

The quadrennial report on physician pay comparability, mandated by the Congress, is the topic of this publication and is being printed for the use of the Congress and the public.

G.V. (SONNY) MONTGOMERY,
CHAIRMAN.

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I. BACKGROUND

This report is submitted in accordance with the requirements of Section 104 of P.L. 96-330 as codified in Title 38 U.S.C. Section 4118 (g)(1) and (2). This legislation requires the Department of Veterans Affairs to submit a report to the President by December 31, 1988, and once every four years thereafter, recommending appropriate amounts of special pay to make possible the recruitment and retention of a well qualified employee work force of physicians and dentists capable of providing quality care for eligible veterans. The report also requires the Secretary of Veterans Affairs to:

- Define the bases for pay distinctions among various categories of physicians and dentists employed by the VA, other Federal Agencies, and the non-Federal sector.

- Obtain measures of income from the employment or practice of physicians and dentists in the non-VA sector and use them as guidelines for adjusting special pay for VA physicians and dentists.

- Recommend appropriate amounts of special pay to achieve levels of total pay for VA physicians and dentists that are reasonably comparable to non-VA physicians and dentists in similar employment settings.

The first report on physicians and dentists pay was submitted to the Office of Management and Budget in March 1983. This submission followed an approved extension that provided the then Veterans Administration with an opportunity to fully assess the impact of increases in the base pay cap that occurred in October and December 1982, on overall physician and dentist compensation. As a result of this review and the pay cap increases no changes were recommended in the physician/dentist special pay structure in 1985.

Because of the substantial increase in the base pay cap in October 1982, and an additional anticipated increase in the cap in December 1982, on top of a major increase in special pay in 1980, the VA on October 3, 1982, instituted an offset to physicians and dentists special pay. This offset, which is geared to the grade and step of a physician/dentist, was intended to ensure that VA salaries did not exceed the salaries for their counterparts in other Federal agencies and the private sector.

The second report on physicians and dentists pay was submitted to OMB in January 1985. This report addressed needed increases in special pay for tenure, responsibility level and scarce medical specialties. However, because of the need to assess the impact on the VA of the FY 1986 budget, the Administrator chose not to make any recommendations in the special pay structure for VA physicians and dentists at that time.

In 1986, a change in reporting requirements was instituted when the required report on physicians and dentists special pay was changed from a biennial report to a quadrennial report. The current report represents the first submitted under that legislative change.

The Department of Veterans Affairs (VA) notified the Office of Management and Budget that the 1988 Report would be delayed for up to six months. By delaying the Department's submission the most current comparative data available from a variety of sources was included in the report ensuring that there was an accurate analysis of the Department's pay and employment situation for physicians and dentists. These sources included the Association of American Medical Colleges (AAMC), the American Medical Association (AMA), the American Dental Association (ADA), American Association of Dental Schools (AADS), the Department of Defense (DoD), and Health Maintenance Organizations (HMO's).

To complete the attached report, the Veterans Health Services and Research Administration (VHS&RA) contracted with the Klemm Analysis Group (KAG) of Washington, D.C., to collect and analyze the appropriate compensation data. The KAG report was then reviewed by a task force of senior VHS&RA and VA officials who developed this report and recommendations.

Of special note is the fact that this is the third report to be submitted under the requirements of P.L. 96-330. For a variety of reasons, no changes were made in physician/dentist special pay as a result of the two previous reports. Therefore, the special pay structure and pay rates that were instituted in 1980 to enhance the VA's ability to recruit and retain a workforce of well qualified physicians and dentists remain in place despite major changes that have occurred in the health care industry since that time.

II. Introduction

This report on the adequacy of VA physicians and dentists pay is being submitted at a time when the entire VA health care system is facing increased challenges in recruiting and retaining a well-qualified workforce of health care professionals while trying to maintain the quality of care it delivers in a tight budget climate.

Since the current system of physicians and dentists pay was implemented in 1980, numerous changes have occurred in the health care industry. The Department of Veterans Affairs faces a continuing shortage of nurses, therapists, and other technical health care workers. In response, the Department has had to substantially increase the number of special salary rates it pays on a regional/locality basis to assist in recruitment and retention of employees in these occupations. For example, in FY 1987 the total annual funding of special salary rates was $18 million. By FY 1989 this funding had increased to $100 million with over 70 occupations receiving special pay rates at 153 Medical Centers. Other legislative changes in premium pay have been implemented along with the conversion of six health care occupations to the Title 38 system of employment, for appointment and pay purposes, to aid in recruitment and retention efforts.

While such major changes have been effected in recognition of real market conditions, fringe benefits and special pay compensation of physicians have remained essentially unchanged since 1980. Yet, the physician staff is the keystone of any health care organization.

The percent of total personal services dollars spent on physicians and dentists special pay has declined steadily since FY 1983, from 17% of total personal services costs to 14% in FY 1988. At the same time the total number of full-time and part-time physicians has risen from 11,099 in 1981 to 12,649 in 1988, a 14% increase. Of special concern is the fact that almost all of the increase in physician employment has been in the part-time category. Since 1981 the part-time physician workforce has grown 31.5% from 4,279 to 5,625 in 1988. During the same period full-time physician employment grew only 2.9% from 6,820 in 1981 to 7,024 in 1988. This slow growth in the physician workforce occurred at a time when there has been a significant rise in all VA workload indicators. From FY 1981 through FY 1988 the number of outpatient visits increased by 34%, while the number of inpatients treated rose by 7% and the number of nursing home patients treated rose by 101%. (See VA Appendix pp. A-1, A-2)

During the decade of the 1980's, while VA physician compensation has remained fairly static and workload has increased, employers in the non-Federal sector have significantly increased the salaries paid to their practitioners. The Klemm report clearly displays this increase in non-Federal physician pay in a number of comparisons. (Klemm Tables A-14 through A-22, pp. A17 through A25.) The net effect has been to exacerbate the difficulties VA faces in hiring and keeping full-time well-qualified physicians. The significant increase in part-time physician employment is an indicator that VA physicians are again reverting to this status as a means to supplement their incomes. This forces VA to hire more physicians to accomplish its workload, increasing personnel costs, complicating coverage, disrupting the continuity of patient care and decreasing efficiency.

Given the education, research and patient care missions of VA, the quality of VA physicians is a serious concern. As the Klemm Analysis Group report points out, over 50 percent of U.S. residency program graduates receive a portion of their training within the Department of Veterans Affairs (Klemm p. 12). Highly qualified, well trained physicians are required to carry out these teaching responsibilities. VA sponsors research which has led to breakthroughs in molecular biology, electronically activated prostheses for those with spinal cord injury or limb trauma, major understandings into the diagnostic and therapeutic interventions appropriate to common clinical disorders such as hypertension, heart disease, intestinal bleeding, stroke prevention, periodontal disease, and AIDS. Special training, discipline, and capabilities are required to perform research which is meaningful to veterans and society in general. Advanced technology, new invasive procedures, new drugs, and the complexities associated with the treatment of AIDS and the needs of an aging veteran population demand a sophisticated, highly trained physician workforce. To attract such practitioners, who are well qualified to meet these requirements and provide quality care to our nation's veterans, reasonably comparable salary levels are a critical factor.

The Klemm Report surveys a number of studies completed over the past four decades which examined the issue of physician supply in the United States (Klemm pp. 13-20). While some reports have predicted a surplus of physicians by the 1990's, other reports have urged caution in accepting that conclusion. Because of the complexities and variables which enter into any prediction of physician supply, the availability of physicians in the labor market during the next several decades remains unclear. The VA cannot rely upon a projected physician surplus in the 1990's to avert an approaching crisis in recruitment and retention of its medical staff.

The following portions of this report discuss major findings of the Klemm report and provide detailed recommendations aimed at dealing with the identified problems.

III. Discussion

The Department of Veterans Affairs has carefully analyzed the Klemm report and its findings. The review revolved around the merits and limitations of the Klemm study. The Department endorses the Klemm report and generally agrees with the thrust of its recommendations for the following reasons:

- The report was prepared by an impartial third party professionally equipped to gather and analyze the required data.
- The report is comprehensive; it examines numerous data sources including the Department of Defense, Health Maintenance Organizations, the American Medical Association and the Association of American Medical Colleges, among others.

- The report's major findings and recommendations are primarily based upon comparative data from the Association of American Medical Colleges (AAMC). As noted in the report, this data source is the most relevant for comparison purposes with VA. One hundred thirty two VA medical centers are affiliated with 103 U.S. medical schools. The educational, clinical and research missions of these medical schools closely resemble those of the affiliated VA medical centers.

- The report did not heavily rely upon data sources which bear little relationship to VA's pay environment. The value of Department of Defense (DoD) data as a comparison tool is limited due to the differences in the missions of DoD and VA, the nature of obligated service in DoD and the front loading of tuition/scholarship benefits given to DoD medical personnel. The AMA's data base deals with physicians in a number of practice situations which bear little resemblance to the VA work environment and the pay structure is unattainable in an institutional setting. The Klemm report discusses DoD salaries on pages 121-122 and in Table A-28 on page A-31.

Given the strengths of the Klemm report, there were still a number of issues that were either not addressed or not sufficiently emphasized by the study. For example, the Veterans Health Services and Research Administration (VHS&RA) is facing a two fold crisis in the recruitment and retention of physicians and dentists. The first crisis is a "current" one. Its effects are demonstrable and evidence of it runs through the Klemm report. Components of this "current crisis" are:

- Klemm's data emphatically demonstrates that in some medical speciality areas the VHS&RA lags 33% or more behind national pay rates.

- The extreme compression in VA's current compensation package, well elaborated in the Klemm report, has had a negative effect on the Department's ability to fill senior administrative positions, particularly Chiefs of Staff. Given the fact that VA must hire at higher grade levels to attract physicians, the compression occurs early in a physician's career. Essentially, no career ladder exists for physicians. According to the VHS&RA's Assistant Chief Medical Director for Clinical Affairs, there are now 17 Chief of Staff vacancies which typically take an average of over 18 months to fill. A prolonged vacancy among senior physician administrators hampers the efficient operation of VA's health care system. Part of this problem is a lack of monetary incentive for VA physicians to accept the added responsibility associated with the Chief of Staff position.

- The number of scarce medical specialty contracts has been increasing for the last several years due to the inability of many VA medical centers to recruit certain scarce medical specialists, e.g., radiologists, cardiovascular surgeons, anesthesiologists, and orthopedic surgeons. Between fiscal years 1986 and 1988 there was an 80% increase in the price of these contracts, rising from $20.3 million to $36.5 million while the total number of contracts increased from 185 in FY 1986 to 314 in FY 1988. (Table IV - 21 pp. 108-109).

- The scarce medical specialty contracts tend to blur the real vacancy rate within certain specialties. Medical centers which have been unable to recruit orthopedists or radiologists and have turned to contracts do not continue to report these positions as vacant. Klemm's report could not capture this data and therefore was not able to present the total VA vacancy rate picture. Unfortunately, it would be virtually impossible to capture this data without a time consuming survey of all medical facilities.

Beyond this "current crisis" VA faces an impending crisis of much broader dimensions. Elements of that situation are listed below:

- The compression in VA salaries has made retention in many physician categories difficult. Long and middle term tenure in VA is not rewarded. Turnover rates demonstrate that retention beyond four years is problematic. Most turnover occurs within four years of a physicians joining VA. For example, turnover rates among physicians under 35 years of age with two to four years of VA experience was 22% in 1987. This type of turnover is costly in terms of recruitment and training and is extremely disruptive to the continuity of patient care. It also decreases the pool of skilled senior physicians available in the system. High turnover at the less tenured levels indicates a lack of interest in VA as a career choice among younger physicians. There is no method available under current special pay legislation to remedy this compression/turnover syndrome. (Klemm Tables IV-7 through IV-14, pp. 94-101.)

- In addition to the turnover problem, the Klemm Report indicates that it is currently taking the VHS&RA longer to fill its physician vacancies than it did just a few years ago. Fewer vacancies are being filled within a twelve month period. The Klemm analysis also indicates that in many instances, when physician vacancies are filled, they are being filled by physicians who are less qualified than the physician who left the position. (Klemm Tables IV-15 to IV-18).

- There has been no increase in special pay for physicians and dentists since 1980. In terms of buying power the value of special pay has eroded significantly. If this situation continues, the current crisis faced in the shortage medical specialties and administrative positions will spread to all specialties.

- One of the last incentives to remaining in VA service will expire on October 1, 1990. As of that date, full-time VA physicians and dentists will be able to have 100% of their special pay credited for retirement purposes. Many current employees have indicated that they are waiting for this change to retire. Nearly 50% of Chiefs of Staff will be eligible to exercise this option in 1990. Additionally, 27% of service chiefs will be eligible to take advantage of the higher retirement in October 1990. It is ironic that this authority, designed to aid in the retention of physicians and dentists, will probably result in increased turnover after October 1, 1990, because of the severe compression in VA salaries over the past eight years. Without significant incentives to remain in VA service it is anticipated that large numbers of seasoned physicians and dentists will retire. Prompt action is needed to avert a large loss in senior level physicians after 1990.

- Both the House and Senate Veterans Affairs Committees have acknowledged concerns about the quality of patient care in the Department of Veterans Affairs. A crucial element of quality resides in the medical professionals the Department employs. Only by remaining reasonably comparable with other employers can VA ensure there is no erosion in the quality of its workforce and the patient care provided to veterans.

It is recognized that the Federal government is faced with a budgetary crisis. Nevertheless, the Department of Veterans Affairs is recommending what it believes is needed to alleviate and avert the problems identified in this report. Failure to implement these recommendations and address the issue of physician recruitment and retention in a timely manner will contribute to the erosion of the quality of patient care VA is able to offer. It will also hamper the Department's ability to carry out its resident training and research missions.

IV. Considerations

In arriving at specific recommendations on physician and dentist special pay, the Department was guided by the following principles:

- Focused use of the special pay components to address the greatest needs in physician and dentist recruitment and retention.

- Maintaining reasonable comparability with Federal and comparable non-Federal employers.

- Reduced pay compression for physicians and dentists.

- Adequate compensation for specialty training and administrative responsibilities.

- Retention of seasoned physicians and dentists by rewarding continued service.

- o Increased flexibility to meet local special needs.
- o Reducing conditions which lead to the use of expensive alternatives such as contracts and fee basis arrangements.
- o Maintaining a proper mix of medical specialties and subspecialties as demanded by standards of quality care.

V. Recommendations

A. Physicians Special Pay Elements:

The Department considered each element of the current special pay structure. These elements of special pay are discussed in the following recommendations:

1. Primary Special Pay. The Department agrees with the Klemm recommendation to reduce the primary pay from $7,000 to 2,000 for physicians. This $5,000 "offset" will be better spent in extending tenure pay to assist in retention. The $2,000 amount recommended for primary pay will help to ensure a competitive starting salary.

2. Full-Time. The full $6,000 should be retained to encourage full-time employment of physicians.

3. Tenure. This element should be expanded and increased to alleviate the serious salary compression experienced by VA while also serving as a strong enhancement to physician/dentist retention. Based on Klemm's analysis of VA turnover rates, the greatest loss of VA physicians occurs between the four and six years of experience levels. The Department recommends weighting the tenure amounts at these plateaus and at the "20 years or more" level, to offset the anticipated 1990 retirement changes, with the following schedule:

Years of Service	
0 less than 2 years	$ 0
2 less than 4 years	$ 3,000
4 less than 6 years	$ 7,000
6 less than 10 years	$11,000
10 less than 15 years	$15,000
15 less than 20 years	$20,000
20 years or more	$25,000

These tenure categories should be extended to all physicians including Chiefs of Staff in amounts large enough to encourage continued employment.

The Klemm recommendation that tenure pay be linked to a physician's performance was also considered. However, the current physician proficiency system does not lend itself to this use. It was felt performance could be addressed by improving the proficiency system, hiring physicians/dentists in lower grades and providing career ladder promotions, and basing scarce specialty pay in part, on performance in the job.

4. Scarce Specialty. Not all medical centers in all locations must pay the same compensation for the same specialties. VA is recommending adoption of a range of pay for each scarce specialty. In this way, the local medical center would be better able to compete in the local labor market where difficulty in recruiting for the specialty could be demonstrated. The local medical center could also adjust compensation for the individual physician's level of expertise and specific assignment. The amounts are based upon the pay disparties within these specialties identified in the Klemm Report. The following specialties and schedule are recommended:

Specialized Surgery	$ 0 - $40,000
Anesthesiology	$ 0 - $25,000
General Surgery/Urology	$ 0 - $25,000
Radiology	$ 0 - $35,000
Psychiatry	$ 0 - $15,000
Spinal Cord Injury/Physiatry	$ 0 - $15,000

The VHS&RA does not envision that many specialists will be paid at the top of the ranges recommended. Physicians, including Service Chiefs, assigned for at least 75% of their time and specialty trained in these areas would be eligible for this component, depending upon local market conditions and individual qualifications. Chiefs of Staff and physician/dentist medical center Directors would not be eligible for this component.

The Department endorsed Klemm's finding that this element was no longer required for Pathology specialties.

The specific justification for each scarce medical category added is as follows:

o Urology: A review of the data in the Klemm report justified moving urology from "specialized surgery" to "general surgery." Competitive salaries reported in the analysis and recruitment and retention problems were felt to justify this movement to a lower specialty pay level.

- Spinal Cord Injury and Physiatry. These specialties are particularly important to the VA mission of caring for war-disabled veterans and an aging veteran population. Physiatrists are grouped with "other" physicians in many of the Klemm analyses. VA figures show a 12.9% turnover rate for this speciality in 1985 and a 10.6 % rate for 1986. It takes an average of eight to nine months to fill these vacancies. Unique to VA are its 22 Spinal Cord Injury centers and their physicians. These physicians require specialized training and understanding to deal with the extremely difficult problems of severe disability and its psychological effects. This is a field where VA experience has shown recruitment is time consuming, costly and difficult.

- Psychiatry. The Klemm report illustrates the fact that VA has greater difficulty recruiting and retaining psychiatrists than most other major medical specialties as measured by the number of vacancies, turnover rate and length of time required for staff replacement (p. 137). This information has been corroborated by a 1988 survey conducted by VA. This survey showed a 14.59% vacancy rate for psychiatry which included 29 vacancies out of 140 Chief, Psychiatry Service positions. The majority of full-time staff psychiatry vacancies have required six or more months to fill and for almost 20% of the vacancies, recruitment took more than a year. Recruitment and retention of psychiatry staff is most difficult for unaffiliated VA medical centers and those with larger psychiatric bed sections.

The number of physicians potentially eligible for pay in each scarce category as of December 31, 1988, is displayed below:

Specialty	Full-Time	Part-Time
Specialized Surgery	153	1,107
Anesthesiology	186	132
General Surgery/Urology	397	806
Radiology	423	266
Psychiatry	1,198	687
Spinal Cord Injury/Physiatry	227	99

5. Board Certification. The current levels paid for primary and secondary board certifications should be continued. Board certification is an indicator of achievement of a desirable level of quality by a physician and should be encouraged. The Department recommends $2,000 for primary board certification with an additional $500 for secondary or subspecialty certification.

6. Administrative Responsibility. To attract and retain quality administrators from the ranks of the clinicians, greater incentives need to be established in the special pay structure for these added responsibilities. At the same time, it is recognized that the complexity and size of medical centers and clinical services vary widely throughout the VA system. Therefore, it is recommended that Service Chiefs, Chiefs of Staff and Medical Center Directors be paid within a range based upon the complexity of the assignment. The following amounts are recommended:

ADCMD/ACMD (VACO)	$48,000
Deputy Assistant CMD (VACO)	$44,000
Service Directors (VACO)	$41,500
Deputy Service Director (VACO)	$40,000
Physician Medical Center Director	$20,000 to $40,000
Chief of Staff	$15,000 to $38,000
Service Chief	$ 5,000 to $15,000

7. Geographic. This element of special pay should be retained. However, it is recommended that a range from 0 - $15,000 be created. This will allow for more meaningful distinctions in pay for remote and high cost areas of the country. It is also recommended that approval of this component remain with the Chief Medical Director. This authority should see limited use in only the most unusual situations. Under current authorities eighteen locations have approval for this component of special pay.

B. Dentists Special Pay

After careful review of the Klemm report and extensive discussion, one change is recommended in the current special pay structure for dentists.

There have been numerous delays and difficulties in filling Chief, Dental Service vacancies over the past several years. The current $2,750 differential in special pay for service chiefs has proven ineffective in attracting employees to accept these additional responsibilities.

Consistent with the recommendations for physician service chiefs, it is recommended that a range of $4,000 to $7,000 be established for dental service chiefs. An amount of $8,500 is also recommended for dentist Chiefs of Staff.

All of the other current special pay elements for dentists should be retained at their current rates.

C. Part-time Physicians

The amounts of special pay for part-time physicians in all categories except "Full-Time" should be established at 75% of the full-time rate. This is consistent with the current special pay legislation. Physicians would be required to be employed at least half-time to be eligible to receive special pay.

D. Other Recommendations:

1. Ceilings. It is strongly recommended that no caps or ceilings be imposed on the special pay elements. To provide meaningful distinctions in pay it is necessary that the full range of each element be available for use. The amounts recommended are those necessary to attract and retain highly qualified specialists and administrators.

2. Administrative Offset. The incentive special pay offsets of 1982 should be eliminated for physicians and dentists and this is presently being pursued outside of this report.

3. Delegation of Authorities. It is recommended that, where a range in pay is listed (e.g., scarce specialty, responsibility) the authority to set the level of pay for an individual physician be delegated as much as possible, within specific, centrally developed criteria, and oversight. This will allow for maximum flexibility for recruiting in an increasingly competitive market. An exception to this delegation would be the geographic component, approval of which should remain with the Chief Medical Director.

E. Cost of Recommendations

A full breakdown of the costs associated with the recommendations are contained in the Appendix on pages A-10 through A-13.

APPENDIX

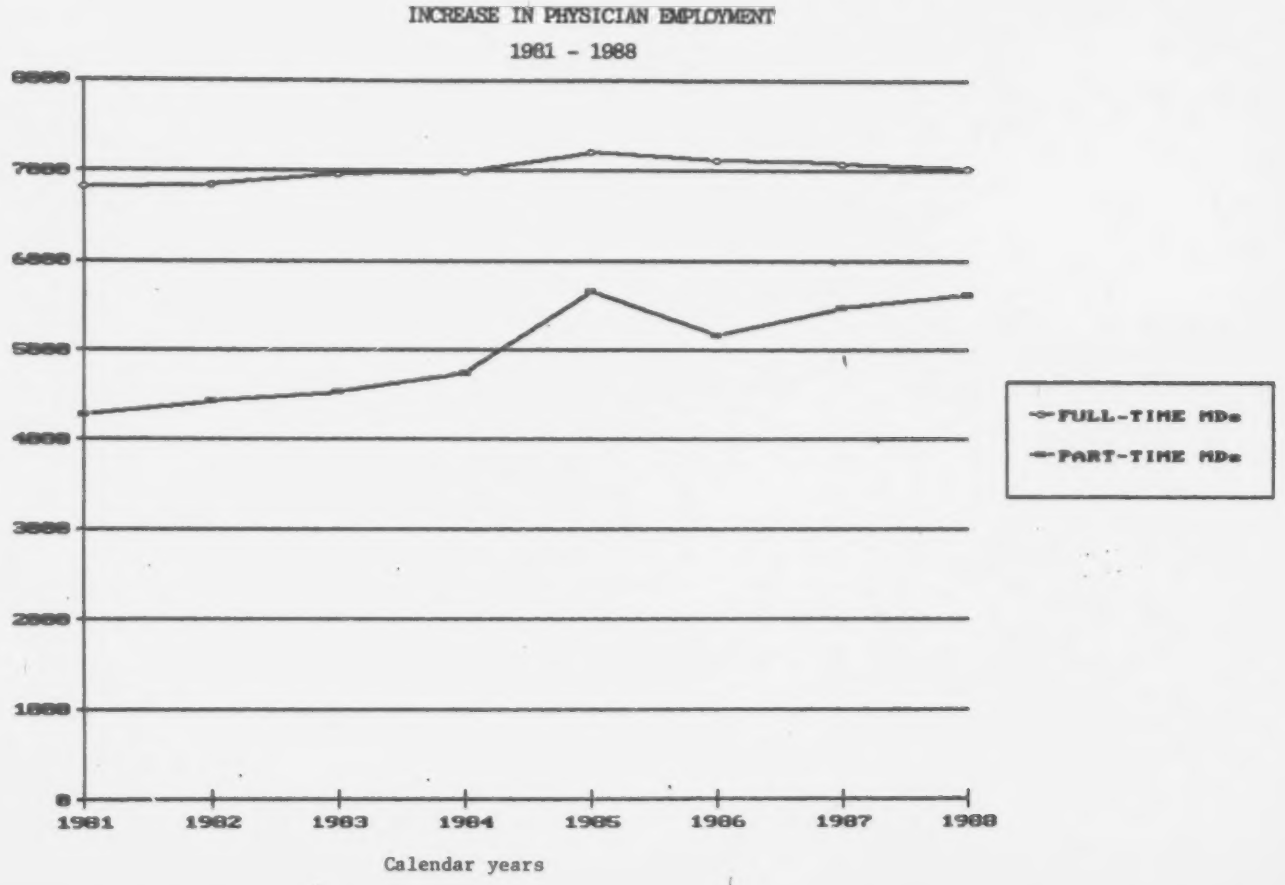
VA MEDICAL CARE WORKLOAD SUMMARY

FISCAL YEARS 1981 - 1988

Fiscal Year	VA Hospital Patients Treated Excluding Dialysis	VA Nursing Home Patients Treated	Staff Medical Outpatient Visits Including Dialysis
1981	1,015,858	13,554	16,057,708
1982	1,011,663	15,072	16,092,568
1983	1,044,977	16,473	16,852,976
1984	1,050,823	17,187	17,174,256
1985	1,060,228	20,442	18,035,056
1986	1,078,316	23,940	18,707,159
1987	1,076,962	25,567	20,092,518
1988	1,086,456	27,220	21,473,403
% Change, FY 81 to FY 88	6.95%	100.83%	33.73%

NOTE: One-day dialysis treatments were included in VA hospital inpatient workloads through FY 1987, but were reclassified as outpatient workload and have been included in staff medical outpatient visits beginning with FY 1988. For the purpose of the above comparison, one-day dialysis treatments have been excluded from hospital patients treated and included in outpatient visits for all of the years shown.

A-1


INCREASE IN PHYSICIAN EMPLOYMENT
1981 - 1988
8000
7000
6000
5000
4000
3000
2000
1000
0
1981
1982
1983
1984
1985
1986
1987
1988
Calendar years
FULL-TIME MDs
PART-TIME MDs

SPECIAL PAY FOR PHYSICIANS
(FULL-TIME)

CURRENT		PROPOSED	
CATEGORY	AMOUNT	CATEGORY	AMOUNT
Primary	$ 7,000	Primary	$ 2,000
Full-Time	$ 6,000	Full-Time	$ 6,000
Tenure:		Tenure:	
2 - 4 yrs.	$ 1,000	2 - 4 yrs.	$ 3,000
5 - 7 yrs	$ 2,000	4 - 6 yrs.	$ 7,000
8 + yrs.	$ 3,000	6 - 10 yrs.	$11,000
		10 - 15 yrs.	$15,000
		15 - 20 yrs.	$20,000
		20 + yrs.	$25,000
Scarce Specialties		Scarce Specialties	
Anesthesiology	$13,500	Anesthesiology	$0 - $25,000
Orthopedic Surgery	$13,500	Specialized Surgery	$0 - $40,000
Radiology	$13,500	Radiology	$0 - $35,000
Pathology	$11,500	Gen. Surgery/Urology	$0 - $25,000
Physiatry	$ 4,000	Physiatry/SCI	$0 - $15,000
Spinal Cord Injury	$13,500	Psychiatry	$0 - $15,000
Board Certification		Board Certification	
1st Board, or	$ 2,000	1st Board, or	$ 2,000
2nd Board	$ 2,500	2nd Board,	$ 2,500
Responsibility		Responsibility	
ADCMD/ACMD (VACO)	$15,300	ADCMD/ACMD (VACO)	$48,000
DACMD (VACO)	$14,440	DACMD (VACO)	$44,000
Svc. Dir. (VACO)	$13,500	Svc, Dir. (VAC0)	$41,500
Dep. Svc. Dir. (VACO)	$13,000	Dep. Svc. Dir. (VACO)	$40,000
Director Grade	$13,000	Physician Director	$20,000-$40,000
Executive Grade	$12,600	Chief of Staff	$15,000-$38,000
Chief of Staff	$12,600	Service Chief	$ 5,000-$15,000
Service Chief	$ 9,900		
Geographic		Geographic	
Various Sites	$2,000-$5,000	Various Sites	$0 - $15,000
CAP = $22,500		Eliminate all caps.	

SPECIAL PAY FOR PHYSICIANS
(PART-TIME)

CURRENT		PROPOSED	
CATEGORY	AMOUNT	CATEGORY	AMOUNT
Primary	$ 7,000	Primary	$ 1,500
Tenure:		Tenure:	
2 - 4 yrs.	$ 750	2 - 4 yrs.	$ 2,250
5 - 7 yrs	$ 1,500	4 - 6 yrs.	$ 5,250
8 + yrs.	$ 2,250	6 - 10 yrs.	$ 8,250
		10 - 15 yrs.	$11,250
		15 - 20 yrs.	$15,000
		20 + yrs.	$18,750
Scarce Specialties		Scarce Specialties	
Anesthesiology	$10,875	Anesthesiology	$0 - $18,750
Orthopedic Surgery	$10,875	Specialized Surgery	$0 - $30,000
Radiology	$10,875	Radiology	$0 - $26,250
Pathology	$ 9,300	Gen. Surgery/Urology	$0 - $18,750
Physiatry	$ 3,300	Physiatry/SCI	$0 - $11,250
Spinal Cord Injury	$10,875	Psychiatry	$0 - $11,250
Board Certification		Board Certification	
1st Board, or	$ 1,500	1st Board, or	$ 1,500
2nd Board	$ 1,875	2nd Board,	$ 1,875
Responsibility		Responsibility	
Executive Grade	$ 9,190	Service Chief	$ 3,750-$11,250
Chief of Staff	$ 9,190	Chief of Staff	$11,250-$28,500
Service Chief	$ 7,220		
Geographic		Geographic	
Various Sites	$1,500-$4,000	Various Sites	$0 - $11,250

Note: All amounts displayed are pro-rated to actual hours the individual is in a pay status. A 6/8 time physician would receive 6/8 of the amounts specified.

SPECIAL PAY FOR DENTISTS

CURRENT CATEGORY	AMOUNT	PROPOSED CATEGORY	AMOUNT
Primary	$ 2,500	Primary	$ 2,500
Full-Time	$ 1,000	Full-Time	$ 1,000
Tenure:		Tenure:	
2 but LT 7 yrs	$ 500	2 but LT 7 yrs	$ 500
7 years or more	$ 1,000	7 years or more	$ 1,000
Scarce Specialties		Scarce Specialties	
Oral Surgery	$ 7,500	Oral Surgery	$ 7,500
Periodontics	$ 7,000	Periodontics	$ 7,000
Prosthodontics	$ 6,500	Prosthodontics	$ 6,500
(BD Eligible $1,500 less)		(BD Eligible $1,500 less)	
Responsibility		Responsibility	
Service Chief	$ 2,750	Service Chief	$ 4,000-$ 7,000
Chief of Staff	$ 3,500	Chief of Staff	$ 8,500
Executive Grade –	$ 3,500	Med. Center Dir.	$ 8,800
Director Grade	$ 3,625	Dep. Svc. Dir. (VACO)	$ 8,800
Dep. Svc. Dir. (VACO)	$ 3,625	Svc. Dir. (VACO)	$ 9,100
Svc. Dir. (VACO)	$ 3,750	DACMD (VACO)	$ 9,700
DACMD (VACO)	$ 4,000	ADCMD/ACMD (VACO)	$10,300
ADCMD/ACMD (VACO)	$ 4,250		
Geographic		Geographic	
Various Sites	$1,750-$2,500	Various Sites	$1,750-$2,500
CAP $10,000		Eliminate all caps.	

PHYSICIAN PROFILE - CHIEF OF STAFF

Chief of Staff, less than two years of service, Executive Grade/Step 8

Factors	Current	Proposed (Maximum)
Primary	$ 7,000	$ 2,000
Full-Time	$ 6,000	$ 6,000
Tenure	$ 0	0
Responsibility	$12,600	$ 38,000 (maximum)
Board Certification	$ 2,000	$ 2,000
Special Pay	$27,600	$ 48,000
Limitation	$ 5,100	0
Total Special Pay	$22,500	$ 48,000
Base Pay	$75,500	$ 75,500
Subtotal	$98,000	$123,500
Offset	$ 2,682	0
Total Pay	$95,318	$123,500

- Under the proposed changes this physician's starting salary could range from $100,500 to $123,500.

- Because of the existing pay cap this same physician will never earn more than $22,500 in special pay throughout his/her career under the current system.

- Under the proposed system, with additional tenure, the same physician would be compensated within the following ranges:

2 to 4 years service	-	$103,500 to $126,500
4 to 6 years service	-	$107,500 to $130,500
6 to 10 years service	-	$111,500 to $134,500
10 to 15 years service	-	$115,500 to $138,500
15 to 20 years service	-	$120,500 to $143,500
20 + years	-	$125,500 to $148,500

- Payment of geographic pay could raise any of these ranges by up to $15,000.

PHYSICIAN PROFILE - SERVICE CHIEF (Internal Medicine)

Chief, Medical Service, One year of service, Chief 10.

Factors	Current	Proposed (Maximum)
Primary	$ 7,000	$ 2,000
Full-Time	$ 6,000	$ 6,000
Tenure	$ 0	0
Responsibility	$ 9,900	$15,000 (maximum)
Board Certification	$ 2,000	$ 2,000
Special Pay	$24,900	$25,000
Limitation	$-2,400	0
Total Special Pay	$22,500	$25,000
Base Pay	$74,303	$74,303
Subtotal	$96,803	$99,303
Offset	$ 2,682	0
Total Pay	$94,121	$99,303

- Under the proposed changes this physician's starting salary could range from $89,303 to $99,303.
- Because of the existing pay cap this same physician will never earn more than $22,500 in special pay throughout his/her career under the current system.
- Under the proposed system, with additional tenure, the same physician would be compensated within the following ranges:

2 to 4 years service	-	$ 92,303 to $102,303
4 to 6 years service	-	$ 96,303 to $106,303
6 to 10 years service	-	$100,303 to $110,303
10 to 15 years service	-	$104,303 to $114,303
15 to 20 years service	-	$109,303 to $119,303
20 + years	-	$114,303 to $124,303

- Payment of geographic pay could raise any of these ranges by up to $15,000.

PHYSICIAN PROFILE - SERVICE CHIEF (Psychiatry)

Chief, Psychiatry Service, One year of service, Chief 10.

Factors	Current	Proposed (Maximum)
Primary	$ 7,000	$ 2,000
Full-Time	$ 6,000	$ 6,000
Tenure	$ 0	$ 0
Scarce Specialty	$ 0	$ 15,000
Responsibility	$ 9,900	$ 15,000 (maximum)
Board Certification	$ 2,000	$ 2,000
Special Pay	$24,900	$ 40,000
Limitation	$-2,400	$ 0
Total Special Pay	$22,500	$ 40,000
Base Pay	$74,303	$ 74,303
Subtotal	$96,803	$114,303
Offset	$ 2,682	$ 0
Total Pay	$94,121	$114,303

- Under the proposed changes this physician's starting salary could range from $89,303 to $114,303.

- Because of the existing pay cap this same physician will never earn more than $22,500 in special pay throughout his/her career under the current system.

- Under the proposed system, with additional tenure, the same physician would be compensated within the following ranges:

2 to 4 years service	-	$ 92,303 to $117,303
4 to 6 years service	-	$ 96,303 to $121,303
6 to 10 years service	-	$100,303 to $125,303
10 to 15 years service	-	$104,303 to $129,303
15 to 20 years service	-	$109,303 to $134,303
20 + years	-	$114,303 to $139,303

- Payment of geographic pay could raise any of these ranges by up to $15,000.

PHYSICIAN PROFILE - RADIOLOGY

Radiologist, Board Certified, New Hire at Chief/10, High Cost Area.

Factors	Current	Proposed (Maximum)
Primary	$ 7,000	$ 2,000
Full-Time	$ 6,000	$ 6,000
Tenure	$ 0	0
Scarce specialty	$13,500	$ 35,000 (maximum)
Board Certification	$ 2,000	$ 2,000
Special Pay	$29,000	$ 45,000
Limitation	$-6,500	0
Total Special Pay	$22,500	$ 45,000
Base Pay	$74,303	$ 74,303
Subtotal	$96,803	$119,303
Offset	$ 2,682	0
Total Pay	$94,121	$119,303

- Under the proposed changes this physician's starting salary could range from $84,303 to $119,303.

- Because of the existing pay cap this same physician will never earn more than $22,500 in special pay throughout his/her career under the current system.

- Under the proposed system, with additional tenure, the same physician would be compensated within the following ranges:

2 to 4 years service	-	$ 87,303 to $122,303
4 to 6 years service	-	$ 91,303 to $126,303
6 to 10 years service	-	$ 95,303 to $130,303
10 to 15 years service	-	$ 99,303 to $134,303
15 to 20 years service	-	$104,303 to $139,303
20 + years	-	$109,303 to $144,303

- Payment of geographic pay could raise any of these ranges by up to $15,000.

DEPARTMENT OF VETERANS AFFAIRS
VETERANS HEALTH SERVICES & RESEARCH ADMINISTRATION

Report to the President on the Adequacy of Special Pay for Physicians and Dentists

April 1989

Cost Estimate for Full-Time Physicians

Special Pay Category	Cost Assumption	FTEE	Projected Cost
Primary	$2,000	6,732	$13,464,000
Full Time	$6,000	6,732	$40,392,000
Tenure			
0 < 2 years	$ 0	1,510	$ 0
2 < 4 years	$ 3,000	1,416	$ 4,284,000
4 < 10 years	$10,000	1,773	$17,730,000
10 < 20 years	$18,000	1,546	$27,828,000
20 + years	$25,000	487	$12,175,000
FT Tenure Cost			$62,017,000
Scarce Specialty (Cost assumptions figured at 80% of maximum rate.)			
Anesthesiology	$20,000	177	$ 3,540,000
Specialized Surgery	$32,000	146	$ 4,672,000
Radiology	$28,000	402	$11,256,000
Gen. Surg./Urology	$20,000	378	$ 7,560,000
Physiatry/SCI	$12,000	216	$ 2,592,000
Psychiatry	$12,000	1,138	$13,656,000
FT Scarce Specialty Cost			$43,276,000
Board Certification	$ 2,000	4,376*	$ 8,752,000
Responsibility Level (Cost assumptions figured at 80% of maximum rate.)			
Service Chief	$12,000	761	$ 9,132,000
Chief of Staff	$30,500	155	$ 4,728,000
MD/DDS Director	$32,000	4	$ 128,000
CMD/DCMD/ADCMD/ACMD	$48,000**	8	$ 384,000
Medical Director	$43,000***	19	$ 817,000
FT Responsibility Level Cost			$15,189,000

* * * * * * * * * * *

Total Cost for FT Physicians	$183,090,000

* Represents 65% of FT FTEE since 65% of FT VA MD's are board certified.
** Figured at Maximum Rate.
*** Average of proposed rates.

DEPARTMENT OF VETERANS AFFAIRS
VETERANS HEALTH SERVICES & RESEARCH ADMINISTRATION

Report to the President on the Adequacy of Special Pay for Physicians and Dentists

April 1989

Cost Estimate for Part-Time Physicians

Special Pay Category	Cost Assumption	FTEE	Projected Cost
Primary	$1,500	1,990	$ 2,985,000
Tenure			
0 < 2 years	$ 0	590	$ 0
2 < 4 years	$ 2,250	380	$ 855,000
4 < 10 years	$ 7,500	475	$ 3,563,000
10 < 20 years	$13,500	414	$ 5,589,000
20 + years	$18,750	131	$ 2,456,000
PT Tenure Cost			$12,463,000
Scarce Specialty (Cost assumptions figured at 80% of maximum rate and then 75% of that amount since PT MD cannot exceed 75% of the FT maximum amount.)			
Anesthesiology	$15,000	47	$ 705,000
Specialized Surgery	$24,000	390	$ 9,360,000
Radiology	$21,000	94	$ 1,974,000
Gen. Surg./Urology	$15,000	283	$ 4,245,000
Physiatry/SCI	$ 9,600	35	$ 336,000
Psychiatry	$ 9,600	242	$ 2,323,000
PT Scarce Specialty Cost			$18,943,000
Board Certification	$ 1,500	1,411*	$ 2,117,000
Responsibility Level (Cost assumptions figured at 80% of maximum rate and then 75% of that amount since PT MD cannot exceey 75% of the FT maximum amount.)			
Service Chief	$ 9,000	131	$ 1,179,000
PT Responsibility Level Cost			$ 1,179,000
Total Cost for PT Physicians			$37,687,000

* Represents 71% of PT FTEE since 71% of PT VA MD's are board certified.

DEPARTMENT OF VETERANS AFFAIRS
VETERANS HEALTH SERVICES & RESEARCH ADMINISTRATION

Report to the President on the Adequacy of Special Pay for Physicians and Dentists

April 1989

Cost Estimate for Full-Time Dentists

Special Pay Category	Cost Assumption	FTEE	Projected Cost
Primary	$2,500	814	$ 2,035,000
Full Time	$1,000	814	$ 814,000
Tenure	$ 800	814	$ 651,000
Scarce Specialty	$7,000	262	$ 1,834,000
Service Chief	$5,600	162	$ 907,000
	* * * * * * * * * *		
Total Cost for FT Dentists			$ 6,241,000

Cost Estimate for Part-Time Dentists

Special Pay Category	Cost Assumption	FTEE	Projected Cost
Primary	$1,875	55	$ 103,000
Tenure	$ 600	55	$ 33,000
Scarce Specialty	$5,250	0	$ 0
Service Chief	$4,200	0	$ 0
	* * * * * * * * * *		
Total Cost for PT Dentists			$ 136,000

DEPARTMENT OF VETERANS AFFAIRS
VETERANS HEALTH SERVICES & RESEARCH ADMINISTRATION

Report to the President on the Adequacy of Special Pay for Physicians and Dentists

April 1989

Cost Estimate

Fiscal Year 1988 Costs:

Full-Time Physicians -	$109,468,000
Part-Time Physicians -	$ 25,020,000
Full-Time Dentists -	$ 3,851,000
Part-Time Dentists -	$ 111,000
Subtotal -	$138,450,000
Benefits @ 13% -	$ 17,999,000
Total -	$156,449,000

Proposal Costs:

Full-Time Physicians -	$183,090,000
Part-Time Physicians -	$ 37,687,000
Full-Time Dentists -	$ 6,241,000
Part-Time Dentists -	$ 136,000
Subtotal -	$227,154,000
Benefits @ 13% -	$ 29,530,000
Total -	$256,684,000

Variance with FY 1988 - $100,235,000 = Actual cost of the report's recommendations.

PHYSICIAN AND DENTIST PAY COMPARABILITY AND EMPLOYMENT STUDY

Final Report

to the

Veterans Administration

Klemm Analysis Group, Inc.
1090 Vermont Avenue, N.W.
Suite 1200
Washington, D.C. 20005

March 3, 1989

PHYSICIAN AND DENTIST PAY COMPARABILITY AND EMPLOYMENT STUDY

Final Report

Veterans Administration

Task Order 1

Contract Number V101(93)P-1204

David Albright
Bliss Cartwright
Evelyn Jaffe
Rebecca Klemm

March 3, 1989

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EXECUTIVE SUMMARY

The purpose of the Quadrennial Report is to examine the role of compensation factors in the recruitment and retention of physicians and dentists at the Veterans Administration (VA). VA compensation for physicians and dentists, as presently conceived, combines a base salary with special incentives for full-time employment, seniority, certain scarce specialties, supervisory responsibilities, board certification, and geographic location.

In this report, the Klemm Analysis Group, Inc. (KAG) describes the VA work force and staffing patterns, including its labor markets for recruiting VA physicians and dentists. We find that the VA manages a complex national health system with three fundamental characteristics:

1. A mandate for teaching and research, as well as patient care that involves close coordination with affiliated medical schools (including joint residency programs and faculty appointments);

2. A commitment to total patient care that requires a highly diversified medical staff covering a wide range of treatment specialties; and

3. A network of hospital and medical stations distributed throughout the United States in many different locations, from large metropolitan areas to small rural towns and villages.

We use empirical data from the Physician Staff Survey and the VA Personnel and Accounting Integrated Data (PAID) Master file to show how these medical specialties and station locations affect the VA's work force and labor market. We describe station locations using a general measure of management complexity levels developed by the VA's

Executive Resources Board. Stations with high levels of management complexity are generally large urban hospitals, affiliated with a major medical school.

VA Work Force. The VA work force for physicians and dentists exhibits certain broad characteristics:

- Supervisory positions tend to be recruited from physicians and dentists inside the VA, with at least ten or more years of service in the Department of Medicine and Surgery (DMS).
- Average years of DMS service are almost identical across the station complexity levels.
- The longer the graduate residency training in a specialty, the greater the likelihood of board certification and part-time employment at the VA.
- The higher the level of station complexity, the greater the likelihood of faculty positions and degrees from U.S. and Canadian medical schools.
- Faculty representation is fairly uniform across the different medical specialties, with approximately two-fifths of the VA medical staff having academic appointments.
- The VA has a compressed, highly uniform pay schedule which treats most full-time physicians and dentists alike, despite widely diverse specialties and station complexity levels.

VA Staffing Patterns. In mapping the labor market for VA physicians and dentists, we examine standard manpower indices for measuring turnover rates, replacement rates, and vacancy rates. We investigate such questions as:

- When staff members enter the VA, where do they come from? When staff members leave the VA, where do they go? Universities? Private practice? Other agencies?
- What specialties and locations have high and low turnover rates? What specialties have high and low replacement rates? What policy interpretations, if any, can be drawn from these rates?

Stations with high levels of management complexity have close

recruitment ties to academic institutions and VA residency programs. Approximately three-fifths of all recruits in the upper complexity levels come from university positions or VA residencies, compared to approximately one-fourth in the lower complexity levels. In contrast, employment losses are more uniform across complexity levels. Most physicians enter the private sector when they leave the VA.

We note certain general patterns in turnover and replacement rates:

- Stations in the lower complexity levels appear to have higher turnover rates than stations in the upper complexity levels;
- Physicians with less than four years of service appear to have high turnover rates and this crosses almost all age groups; and
- Psychiatry/neurology and the administrative specialties appear to have low replacement rates.

Perhaps the most striking characteristic of VA salaries is the high level of compression among physicians. In 1987, approximately 70 percent of new physicians entering the VA started in the Chief Grade (Grade 15) and within the Chief Grade, almost 30 percent started in the top three steps (steps 8, 9, 10). For VA physicians with academic affiliations, we compared VA salaries to medical school salaries. As a general rule, total pay (base plus special pay) for VA physicians with a rank of assistant professor compares favorably to medical school assistant professors. The median total pay in 1987 for VA physicians with a rank of assistant professor was $85,294 a year compared to $83,448 a year for assistant professors in a medical school. But as the academic rank increases, VA salaries fall

increasingly behind. Among full professors, the median total pay in 1987 for VA physicians was $89,794 compared to $124,813 for medical school faculty. For VA physicians without academic appointments, we compared VA salaries to HMO salaries, salaries in the Department of Defense (DOD), and net income for non-federal patient care physicians. As a general rule, the VA pays better or comparable salaries for general practitioners, but for most specialties, VA salaries are lower. For example, in 1987, orthopedic surgeons in HMO's received a median salary of $125,001 compared to $89,794 in the VA (by comparison, an associate professor of orthopedic surgery in a medical school receives median compensation of $145,727).

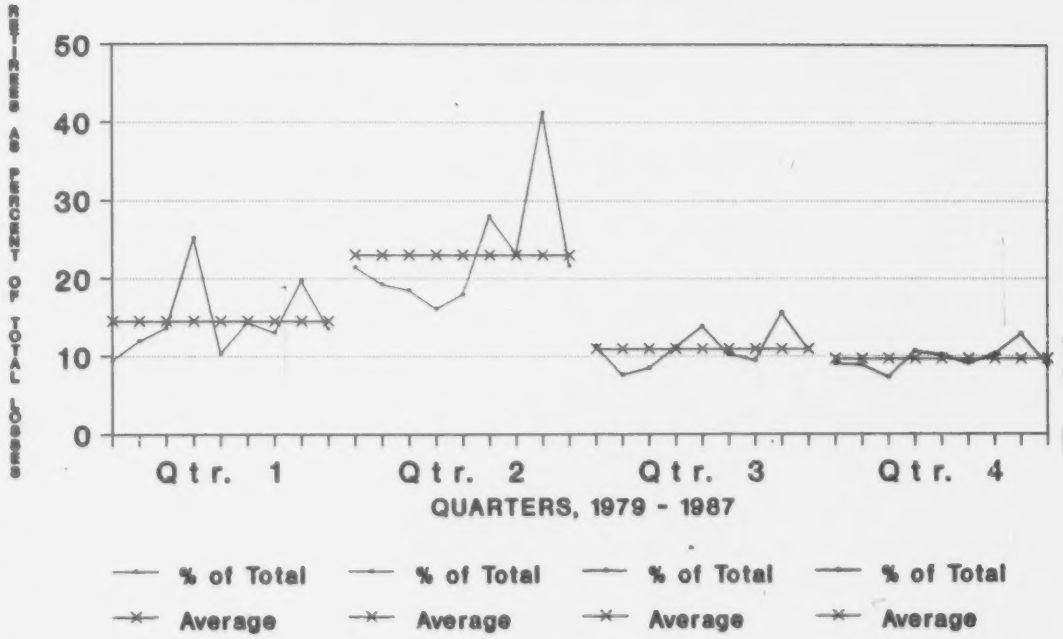
As an important supplementary question, we discuss historical trends in retirement of VA physicians and dentists. At present, VA physicians and dentists receive annuity credit for one-half of their special pay. Starting in 1990, annuity credit will be based on 100 percent of special pay. While it is not clear precisely how many people will be affected by this change, it seems likely that a substantial number of older VA physicians and dentists are waiting in the "pipeline" for this change to occur. To gauge the likely magnitude of future retention problems, we describe retirement trends from fiscal years 1979 through 1987. As Figure 1 illustrates, the retirement of VA physicians and dentists exhibits a strong seasonal pattern, peaking in the second quarter of each fiscal year.

Figure 1 shows a dramatic increase in the number of retirements during the second quarter of fiscal year 1986. The timing of this increase is closely related to the adoption of the VA's current

annuity policy (prior to October 1, 1985, special pay was excluded from VA annuity calculations). We conclude that the projected changes in the VA retirement system are likely to have a substantial impact on VA retention, especially among senior management officials.

FIGURE 1

RETIREES AGED 55 AND ABOVE AS A PERCENT OF TOTAL LOSSES



Source: Physician Recruitment and Staffing Report (RCS 10-0166)
Chart prepared March 3, 1989

SECTION I: INTRODUCTION AND SUMMARY

A. Purpose of the Quadrennial Report

The purpose of the Quadrennial Report is to examine the role of compensation factors in the recruitment and retention of physicians and dentists at the Veterans Administration (VA) as defined by Public Law 96-330:

> "It is the policy of Congress to assure that the levels of total pay for Veterans Administration physicians and dentists are fixed at levels reasonably comparable (A) with the levels of total pay of physicians and dentists employed by or serving in other departments and agents of the Federal Government, and (B) with the income of non-Federal physicians and dentists, so as to make possible the recruitment and retention of a well-qualified employee work force of physicians and dentists capable of providing quality care for eligible veterans" (PL 96-330 as amended).

VA compensation for physicians and dentists, as presently conceived, combines a base salary with special incentives for full-time employment, seniority, certain scarce specialties, supervisory responsibilities, board certification, and geographic location.

Before Klemm Analysis Group, Inc. (KAG) can recommend changes in VA compensation for physicians and dentists, we first need to know how the current system operates -- what labor markets the VA uses, what kind of work force the VA employs, and what segments of the VA tend to gain and lose physicians and dentists. In particular, we need to understand how the VA manages a complex national health system based on three fundamental characteristics:

1. A mandate for teaching and research, as well as patient care that involves close coordination with affiliated medical schools (including joint residency programs and faculty appointments);

2. A commitment to total patient care for both service-related and nonservice-related diagnoses that requires a highly diversified medical staff covering a wide range of treatment specialties (ranging from major spinal cord injuries to routine dental check-ups); and

3. A network of hospital and medical facilities distributed throughout the United States in many different locations, from large metropolitan areas to small rural towns and villages.

We also need to understand the distribution of physicians and dentists by their respective attributes, such as duty status (full-time or part-time), board certification, and seniority. The patterns of these attributes are, in part, the result of the current VA compensation schedule. They are also due to non-monetary factors, such as location, work environment, research facilities, and educational opportunities. Changes in compensation must, therefore, consider not only non-monetary factors but the potential impact these changes may have on other attributes. For example, recommendations to increase the proportion of full-time physicians and dentists could easily undermine institutional arrangements with medical schools that require shared responsibilities for teaching, research, and patient care. Likewise, efforts to replace older staff with younger staff may decrease the number of people available for supervisory positions, and efforts to reward scarce specialties may increase the proportion of part-time staff or foreign medical graduates. We have chosen to examine empirical patterns at the VA first, to determine what parts of the system have high and low part-time employment, high and low board certification, etc. before we examine potential "gaps" between VA and non-VA compensation.

Our empirical analysis suggests that the VA has a compressed,

highly uniform pay schedule which treats most full-time physicians and dentists alike, despite widely diverse specialties and locations. Our empirical analysis also suggests that the VA recruits from specialized labor pools, primarily medical school faculty and recent VA residents, and that the VA is likely to experience a substantial increase in retirements in early 1991 as the result of projected changes in the VA annuity computations.

B. Topics for the Report

This report emphasizes the following topics:

- Survey of published literature on the VA's medical mandate, trends in the supply of physicians and dentists, and changing patterns in medical practice outside the VA (Section II);
- Variations in the VA medical work force across stations and specialties (Section III);
- VA labor markets including turnover and replacement rates across specialties and stations (Section IV); and
- Salary comparisons between the VA and various non-VA physicians and dentists (Section V).

As background preparation for the report, we surveyed the published literature on the VA's mandate for patient care, teaching, and research. We also examined current issues in medical recruitment and retention. Given the recent growth of alternative care facilities (e.g., Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs), crisis centers, etc.), we emphasized potential changes in medical practice and career choices that might affect future VA recruitment. Because VA staffing is also shaped by the increasing number of physicians, a brief history of physician

supply in the United States is included.

Given the importance of retention and recruitment in PL 96-330, we concentrated our data analysis on employment patterns at the VA. We investigated questions like:

- What kinds of medical specialties are found in the VA?
- What is the typical profile of VA physicians and dentists?
- Do most VA physicians and dentists work full-time or part-time?
- Do most physicians and dentists work in urban areas or rural areas?
- Do VA physicians and dentist have many years of VA service?

Based on our initial review of the literature on the medical profession and conversations with VA officials in the Department of Medicine and Surgery (DMS), we began our study by investigating the attributes of VA physicians and dentists by type of station and specialty. The VA encompasses a wide variety of medical stations, ranging from large urban hospitals, often affiliated with a major medical school, to small out-patient clinics and satellites operating from leased office space. The VA also encompasses a wide variety of medical specialties, ranging from highly sophisticated surgical procedures to general internal medicine and dentistry. Whatever the exact dimensions of these comparisons, it seems likely that recruitment and retention patterns in the VA vary greatly by type of station and specialty.

In mapping the labor market for VA physicians and dentists, we examined standard manpower indices for measuring turnover rates,

dropout rates, and replacement rates. We investigated questions such as:

- When staff members enter the VA, where do they come from? Universities? Private practice? Other government agencies?
- When staff members leave the VA, where do they go? Universities? Private practice? Other government agencies?
- What specialties and locations have high and low turnover rates? What specialties and locations have high and low replacement rates? What policy interpretations, if any, can be drawn from these rates?

There will be a major change in the VA retirement system starting in 1990. At present, VA physicians and dentists can count one-half of special pay towards the determination of their highest three salary years. Beginning in 1990, retirement credit will be based on 100 percent of special pay. While it is not clear precisely how many people will be affected by this change (eligibility depends, in part, on whether a person "opted-into" the current retirement system in 1981), it seems likely that a substantial number of older VA physicians and dentists are waiting in the "pipeline" for this change to occur. Thus, the gains and losses in employment which occur during the time period 1985-1987 may not be an accurate reflection of future retention patterns (particularly for those approaching retirement age), and we must determine whether and to what extent the VA is currently experiencing unusually low rates of retirement among older VA physicians and dentists.

Perhaps the most striking characteristic of VA salaries is the high level of compression among physicians. In 1987, approximately 70 percent of new physicians entering the VA started in the Chief Grade (Grade 15) and within the Chief Grade, almost 30 percent

started in the top three steps (steps 8, 9, 10). For VA physicians and dentists with academic affiliations, we compared VA salaries to medical school salaries. As a general rule, total pay (base plus special pay) for VA physicians with a rank of assistant professor compares favorably to medical school assistant professors. The median total pay in 1987 for VA physicians with a rank of assistant professor was $85,294 a year compared to $83,448 a year for assistant professors in a medical school. But as the academic rank increases, VA salaries fall increasingly behind. Among full professors, the median total pay in 1987 for VA physicians was $89,794 compared to $124,813 for medical school faculty. For VA physicians without academic appointments, we compared VA salaries to HMO salaries, salaries in the Department of Defense (DOD), and net income for non-federal patient care physicians. As a general rule, the VA pays better or comparable salaries for general practitioners, but for most specialties, VA salaries are lower. For example, in 1987, orthopedic surgeons in HMO's received a median salary of $125,001 compared to $89,794 in the VA (by comparison, an associate professor of orthopedic surgery in a medical school receives median compensation of $145,727).

C. Data Sources for the Report

In studying these topics, we examined data from the PAID Master File and the 17-5 Physician Staffing Survey. The PAID Master file is a computerized personnel data base showing an employee's work force status (length of service, organizational cost code, salary, etc.) at

a given point in time. We extracted data from the PAID Master file covering all VA physicians and dentists (except interns, residents, consultants, attendings, and those on intermittent status). The 17-5 data base is a quarterly survey which asks VA stations to report information on the number of physicians entering and leaving the VA within a three-month period. Since VA employment remained fairly stable throughout the period 1985-1987, we concentrated our initial empirical analysis on a single representative year, fiscal 1985. To examine the financial compensation of physicians and dentists outside the VA, we collected information from such sources as the Association of American Medical Colleges (AAMC) Report on Medical School Faculty Salaries, The HMO Executive Salary Survey, by Henry V. Warren and Associates, Inc., a special computer run from the American Medical Association (AMA), and the DOD Selected Military Compensation Tables (the so-called "Green Book" of pay rates).

SECTION II: BACKGROUND AND LITERATURE REVIEW

In this section we outline various issues that affect VA decisions regarding compensation, recruitment, and retention. We begin with a brief history of medical care (including the mandate for patient care, teaching, and research) and the VA-medical school affiliation. We include a discussion of the broad range of VA patient care and the scope of VA facilities. We then review issues of physician and dentist supply, changing practice patterns, and recruitment and retention strategies.

A. History of VA Medical Care and the VA-Medical School Affiliation

The Veterans Administration Department of Medicine and Surgery has a primary mission of:

> "maintaining and improving the quality of health care provided to veterans. This mission consists of patient care, medical and prosthetics research and development, education, and maintaining preparedness to serve as the primary contingency backup to the Department of Defense for health care of active duty military forces in times of war or national emergency." (Annual Report, p. 10)

Currently, VA medical care is administered via "172 VA medical centers (VAMCs), 229 outpatient clinics . . . 117 nursing homes, and 17 domiciliaries" (Annual Report, pp. 9-10). Primarily, the VA fulfills its mission through its national network of VA hospitals (in widely varying locations) and their affiliations with 102 medical schools. We diverge briefly to describe how this symbiotic relationship was formed.

History of VA Medical Care. The history of medical care of

veterans goes back to colonial times, with the government's passage in 1798 of an "Act for the relief of sick and disabled Seamen" (Lewis, p. 24). This Act led to the formation of a system of marine hospitals and the beginnings of government medical care. This care grew, and by 1917, 40 Stat. L., 406 declared that the United States government should provide veterans with "medical, surgical, and hospital services and with such supplies, including artificial limbs, trusses, and similar appliances" (Weber and Schmeckebier, p. 153). Later, with the creation of the Veterans' Bureau in 1921, the Federal Board of Hospitalization was set up "to coordinate Federal hospital activities, and to pass on sites and plans for hospital buildings" (Weber and Schmeckebier, p. 162). These early mandates established the foundation for a network of medical centers to provide medical care to the nation's veterans. In addition, the Veterans' Bureau Advisory Counsel suggested in 1924 that the "Veterans' Bureau should emphasize at every point the opportunity for investigation and research" (Lewis, p. 48).

In 1946, Public Law 293 established a Department of Medicine and Surgery in the Veterans' Administration (Lewis, p. 31). This statute declared that:

> "There shall be in the Veterans' Administration a Department of Medicine and Surgery under a Chief Medical Director. The functions of the Department of Medicine and Surgery shall be those necessary for a complete medical and hospital service, including medical research, as prescribed by the Administrator pursuant to this chapter and other statutory authority, for medical care and treatment of veterans." (Lewis, p. 6)

Contained in this law is the official charge of medical care and research. Public Law 293 also legalized residency programs in the

VA, furnished a "pay incentive" for physicians obtaining specialist rating, and called for the regular meeting of an advisory group (Lewis, p. 137).

Following World War II, the fulfillment of the charge of medical care and research became critical. The question of how to provide the best care possible for the nation's wounded was paramount. Administrators at the Veterans Administration felt that the solution to providing top medical care rested in an affiliation with medical schools. Thus, the "Veterans Administration solicited and gained the help of America's medical schools shortly after World War II . . . . The VA-medical school association officially began in 1946 and still operates" (Lewis, p. 17).

Under the direction of General Bradley, General Hawley, and Dr. Magnuson, the affiliation with medical schools was formalized. The Hawley-Magnuson plan

> "created the 'deans committee' arrangement for VA-medical school affiliation. These faculty committees, to be organized and normally to be chaired by the deans, would be relied upon to maintain the highest professional standards in associated VA hospitals." (Lewis, p. 136)

The deans committees are active in the approval of VA physicians and in the specialty certification process. The current definition of an affiliation between a VA hospital and a medical school is the existence of a deans committee.

The goals of the VA-medical school association were spelled out by General Hawley in Policy Memorandum 2: "post-graduate training opportunity for the war-deprived medical veteran, and the betterment of American medicine through increased facilities for graduate

education" (Lewis, p. 137). It is clear that this Memorandum and the Hawley-Magnuson Plan provided for the mission of medical care, research, and teaching which exists at the Veterans Administration today. New VA hospitals were constructed near medical schools and medical schools chose to locate near VA hospitals with the idea of establishing a strong affiliation. Hawley, Bradley, and Magnuson, the founders of this relationship, encouraged construction of large facilities with "broad medical and surgical coverage" and "medical education and research" to make VA hospitals attractive to the medical schools and their personnel (Lewis, p. 178).

Current VA Facilities, Physicians, and Patient Care. Hawley, Bradley, and Magnuson's plan is clearly evident today. VA hospitals are, on average, huge facilities. As of 1987, 81% of VA hospitals had over 200 beds (Annual Report, pp. 180-182).

In addition, the breadth of diagnosis constitutes sixteen categories of diseases and conditions and ninety-three specific groups of disorders. Major specialties for most hospitals include specialized and general surgery, specialized and general internal medicine, anesthesiology, psychiatry/neurology, pathology, radiology, and gerontology. Plans to expand the area of spinal cord injuries are underway (Annual Report, pp. 208-210). The capacity of these facilities enables the VA to provide the care necessary in order to fulfill its promise to the nation's veterans. In 1978, VA facilities underwent reclassification in order to adequately convey the range of services provided to veterans. Consequently,

> "all VA hospitals, hospital-clinic combinations, and hospital-domiciliary combinations are redesignated as

'Veterans Administration Medical Centers'. . . . All VA Centers comprising a regional office and medical activities are redesignated as 'Veterans Administration Medical and Regional Office Centers.'" (Baganz, pp. 2-3)

Today, the benefits of affiliation are clear. It allows the VA to:

- Bring residents to VA hospitals;
- Acquire new procedures due to the learning environment;
- Challenge its physicians to nurture professional competence in the teaching role;
- Carry on research at VA facilities and through the National Institutes of Health;
- Utilize unique resources of medical schools and their hospitals; and
- Acquire land from medical schools for construction of VA hospitals (Lewis, pp. 329-330).

Medical schools benefit as they learn from the large variety of diagnostic cases, in addition to the teaching and expertise of VA physicians.

This VA-medical school affiliation has flourished. According to Dr. John Gronvall (current Chief Medical Director, DMS, VA), more than "50 percent of all physicians practicing in the United States received a significant portion of their education in the VA" (Gronvall, Health Affairs, p. 163). Currently, 134 out of 172 of the Veterans Hospitals have an affiliation with 102 of the medical schools in the United States. The Veterans Administration participates in 1600 residency programs, funding "12% of each year's national total of residency positions" or about 8,000 VA positions annually (Gronvall, Health Affairs, pp. 163-164). In 1988, the VA spent "$224 million in resident stipends and fringe benefits"

(Gronvall, Health Affairs, p. 163). For the academic year 1987-1988, 8,153 VA positions were filled by 30,000 physicians rotated through the residency positions (Gronvall, Health Affairs, p. 165). Gronvall summarizes the advantageous interaction as follows:

> "These interrelated medical care, research, and educational activities are influenced strongly by the needs of both the VA and its affiliates for new diagnostic and therapeutic measures in areas of special importance to veterans' health, and by the need for physician staff trained in important research disciplines." (Health Affairs, p. 163)

The VA affiliation with medical schools also aids the recruitment and retention of VA physicians through the exposure to VA medical practice and the attraction of research. The 1987 Annual Report emphasizes the importance of recruitment and retention of top physicians and outlines several steps to help this process. Included are good management, fringe benefits, a good image of the VA as an employer, and competitive salaries. In addition, the Report states that the research component "is critical to the recruitment, retention, and professional growth of high quality patient care staff" (Annual Report, p. 56).

B. Historical Trends in Physician Supply

For the past four decades, the question of physician supply in the United States has been a major concern. Between 1959 and 1970, experts were concerned about a physician shortage. The predicted shortage was linked to the 1946-1964 baby boom, medicare and medicaid developments, and scientific advancements. As Alvin R. Tarlov, M.D. points out, four major studies predicted a shortage: 1) The Bane

Report to the Surgeon General, 1959; 2) The Coggeshall Report to the American Association of Medical Colleges, 1964; 3) The Miller Report to the President of the United States, 1966; and 4) The Clark Kerr Report to the Carnegie Commission of Higher Education, 1970 (Tarlov, p. 1).

The nationwide concern over a shortage of physicians led to the allocation of federal funds to build teaching hospitals. In addition, money was designated for operating costs to enable medical schools to increase the size of entering classes. Finally, funds were provided for loans and scholarships for medical students. According to Jonathan P. Weiner, Ph.D., these measures led to an increase in the number of medical schools from 94 in 1964 (graduating 9,000 medical students) to 140 in 1985 (graduating 18,000 medical students) (Weiner, quoted in Miller). This growth in the number and size of medical school programs led to a steady increase in physicians, resulting in an increase from 326,000 in 1970 to 467,000 in 1981 (Bureau of Health Professionals (BHP), p. 1).

According to the Bureau of Public Health, the increase in physicians has slowed, but will continue.

> "The supply of active physicians (MDs and DOs) in 1990 is projected to range from 592,600 to 608,200 with a 'most likely' estimate of 594,600. . . . By the year 2000 the Nation can expect to have from 695,800 to 749,900 physicians with a 'most likely' estimate of 706,500." (BHP, p. 8)

Predicted ratios of physicians to patients indicate this increase as well: 199/100,000 in 1981; 235/100,000 in 1990; and 260/100,000 in 2000 (BHP, p. 8). These figures suggest a projected increase in physicians of 51 percent from 1981 to 2000, while the growth in

patient population is projected at 16 percent (BHP, p. 8). This difference in growth rates suggests an impending surplus of physicians.

Continued increase in physician supply reflects the growing numbers of women who are attending medical school. By the year 2000, approximately one-fifth of the practicing physicians will be women. Likewise, foreign medical graduates continue to add to United States manpower, with one out of every five physicians coming from foreign medical programs by the year 2000 (BHP, p. 8).

The fact that the latest American Association of Medical Colleges (AAMC) figures show that the number of medical school applicants has dropped may suggest a lessening of the impending surplus. However, while the total number of applicants has dropped from 35,200 in 1983 to 26,721 in 1988 (decrease of 24.1 percent), the total number of enrolling medical students has remained virtually the same (decrease of 0.6 percent) (AAMC, Facts, pp. 1, 4).

The growing supply of physicians predicted by the Bureau of Public Health was confirmed by the 1980 Summary Report of the Graduate Medical Education National Advisory Committee (GMENAC). Using different methodology and assumptions, this GMENAC report raised some alarm about the steady increase. The major findings were as follows:

- "In 1990 there will be 70,000 more physicians than required to provide physician services" (based on a supply of 536,000 and a requirement of 466,000);
- "By 2000 there will be 145,000 more physicians than required to provide physician services" (based on a supply of 643,000 and a requirement of 498,000); and

- "The expected entry into practice over the next 10 years of 40,000 to 50,000 graduates of foreign medical schools accounts for more than half of the 70,000 physician surplus" (GMENAC, p. 3).

Even with this surplus, GMENAC concludes that certain geographic areas may lack adequate numbers of physicians. In addition, there may be shortages in psychiatry, physical medicine and rehabilitation, and emergency medicine, while family practice, general internal medicine, and general pediatrics may be on target. However, there will be a surplus in most specialties by 1990. But, the predicted supply by specialty includes a deficit of physicians in family practice and general internal medicine, even though surveys indicate increasing numbers going into primary care. While pediatrics seems headed for an oversupply, alteration in health care coverage could lead to an undersupply. Future trends will also demand more physicians in geriatrics and preventive medicine (Council, Vol. 1, p. xxiii). In addition, the demand for plastic surgery and diagnostic radiology will increase. While the ranking of specialties has seemed constant, the extent to which this will remain true is hard to forecast.

According to the Sixth Report to the President and Congress on the Status of Health Personnel in the United States, June 1988, in "both 1980 and 1985, internal medicine had the largest number of practitioners, followed by general/family practice, general surgery, pediatrics, psychiatry, obstetrics/gynecology, anesthesiology, orthopedic surgery and pathology" (p. 3-2). However, the Bureau of Health Professions warns that "in view of the dramatic changes taking

place in the environment in which teaching hospitals operate," it is difficult to project how consistent specialty choice will remain (p. 11).

Increasing numbers of graduating physicians have led to a younger physician population. "47.4% of all MDs have graduated from medical school since 1970," and in "1985, 53.6% of all MDs were under the age of 45" (USDHHS, Sixth Report, p. 3-2). Similarly, there is an increasing number of younger dentists: "approximately 2/3 (59.8%) of current practitioners graduated from dental school since 1965; 31.9% . . . since 1975; 13.2% . . . since 1980" (American Dental Association, General Characteristics, p. 1).

In response to the projected surplus, the recommendations of GMENAC were severe:

> "A 17% decrease in U.S. medical school enrollment compared to current levels; sharp restrictions of the entry into the United States of students from foreign medical schools; no further rise in the number of nonphysician health care providers being trained; and prompt adjustments in the number of residency training positions in individual specialties to bring supply into balance with requirements in the 1990s." (GMENAC, p. 99)

These recommendations have been met with criticism and words of caution. The Sixth Report confirms the increasing numbers of physicians and dentists in relation to the population but cautions against extreme measures for a variety of reasons (p. 2-11). The report also points out that like physicians, the number of dentists has increased significantly. "Between 1970 and 1986 the number of dental specialists more than doubled whereas the number in general practice increased about 31%" (Sixth Report, p. 2-12). Women account for a large part of this increase. Unlike medical school enrollments,

dental schools have shown a decline since 1981, with a 17 percent drop to 1987. In fact, the number of people applying to dental school has declined 64 percent, "from a high of 15,734 in 1975-1976 to 5,724 in 1986-1987" (Sixth Report, pp. 2-6, 2-7).

The Sixth Report warns that these "trends and projections suggest that the pool of candidates for health professional degrees will likely decline by the early 1990s" (p. 2-8). It is speculative as to whether or not these declines correlate to the ever-increasing costs of dental and medical education. Even with the slowing number of graduates, the overall projection is that the "aggregate physician supply can be expected to exceed overall requirements" (p. 2-11). However, in light of the fact that both future supply and demand requirements are uncertain, any changes to the current system must be made with great caution. For example, patient demand has increased, causing "the imbalance between population and physician supply growth to be partially alleviated" (Sixth Report, p. 3-56). Future trends are unknown.

Other reports confirm the need for caution. The Council on Graduate Medical Education, charged with conducting a follow-up to the GMENAC report, agrees that the supply of physicians is increasing in relation to population growth. However, the Council warns that factors that influence supply and demand are unknown. In addition, "there is conflicting evidence as to whether an oversupply of physicians would necessarily lead to socially undesirable consequences" (Council, Vol. 1, p. xxi). The Council concludes that the federal government should not change the current supply

situation. If any change is made, it should be to reduce the size of entering medical school classes (Council, Vol. 1, p. xxii).

Others have reacted to the GMENAC report in a similar way. Kate Casano, in "Predicted Physician Surplus: Was GMENAC Wrong?," presents the two sides of the debate. One school of thought is that the leveling off of medical school enrollments, the large numbers of women entering the force, and the desire for a shorter work week (along with the acceptance of smaller salaries) will lead to a smaller physician surplus than anticipated. On the other hand, increasing numbers of Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs) may lead to a larger surplus than predicted. This surplus would be the result of these alternative care facilities, where "you need only about one physician for every 900 to 1,000 patients, instead of one for every 500 (the rate for traditional service)" (Weiner, quoted in Miller).

According to Karen Rudzinski of the Department of Health and Human Services Bureau of Health Professionals, if the decrease in productivity between 1980 and 1990 is equal to that seen from 1970-1980, the surplus would be eradicated or at least stabilized (Casano, p. 18). In addition, a curtailment of foreign medical graduates would make an oversupply insignificant. Also, according to Dr. Alfred A. Rimm, Ph.D., the growing numbers of women entering the field of medicine will absorb 28 percent of the oversupply for the year 2000 predicted by GMENAC (Rimm, pp. 849-55). Dr. Gerald S. Levey points out that a surplus may be preempted, depending upon "proposed legislation that would reduce the amount that Medicare will

spend to fund post-graduate medical education" (Casano, p. 18). On the other hand, Dr. Paul Ellwood predicts that by the year 2000, if 77 percent of Americans are members of HMOs and PPOs, the surplus will persist (Casano, p. 18).

No one knows what role new diseases such as AIDS and advances in technology will play in the surplus scenario. As Jeffrey E. Harris points out, it is important to consider "the overall desired level of public health and the predicted path of technological change in the medical sector" (J. Harris, p. 77). Harris illustrates GMENAC's failure to do so by citing examples of specialty forecasts. For example, GMENAC predicted an oversupply of dermatologists by underestimating the number of patients who would go for services. However, current patient choice indicates that, given the numbers of patients desiring care for psoriasis and acne, there actually will be a shortage of dermatologists in 1990. Similarly, advances in cardiology, such as the dissolving of blood clots with streptokinase in the prevention of heart attacks, will lead to a greater need of physicians to implement such technology (J. Harris, p. 78).

Harris further argues that increases in physician supply lead to certain advantages: cost containment via HMOs; increases in scientific research; and supply to needy areas (J. Harris, p. 80). He suggests that instead of the cut-backs recommended by GMENAC, that medical school enrollments be kept at the current numbers, and that Medicare subsidies and government support to medical schools be frozen until a clearer picture of supply and demand can guide future actions (J. Harris, p. 82).

C. Changing Patterns of Medical Practice

The unanswered question of supply is closely linked to the changing practice patterns of today's physicians. Increasing numbers of physicians are opting for salaried positions in lieu of private practice. The percentage of "employed non-federal physicians in patient care (excluding residents) grew from 23.4 percent to 25.7 percent from 1983 to 1985" (Sixth Report, p. 3-4). The expansion of alternative care (HMOs, PPOs, Individual Practice Association (IPAs), crisis centers, etc.) has given physicians numerous options for practice choice. In addition, the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) increased the opportunities for HMOs and prepaid care for Medicare recipients (Sixth Report, p. 3-12). This trend indicates a decrease in those choosing private practice and an increase in physicians opting for salaried group positions.

According to David B. Nash, MD, "there are some 323 HMOs operating throughout the United States, with membership totaling 13.6 million . . . . Experts predict a total of 25 million enrollees in just another 5 years" (Nash, p. 245). Nash says the popularity of HMOs is due to the variety of models (eight in all) which will suit many physician styles (pp. 248-249). Numerous studies analyze the factors influencing practice selection. Goodman and Wolinsky "found that physicians primarily concerned with preserving their autonomy are more likely to choose solo practice; physicians who place priority on professional contacts . . . and location rather than

economic variables (e.g. further income opportunities) tend to join groups" (Freund and Allen, p. 800). Solo practitioners are also willing to work longer hours than joiners of groups. Most group members have lower salaries, shorter hours, and more time to pursue personal interests. Young physicians and those new to an area are more likely to join a group than their older, more settled counterparts (Freund and Allen, p. 803). Also, "women doctors are much more likely than men to be hospital-based or to be in salaried employment" (Louis Harris, p. 3). Physicians who believe that groups will contain the cost of health care and that society should provide health care for the poor are also more likely to join groups (Freund and Allen, p. 804).

Personal satisfaction and lifestyle changes are contributing to the growth of HMOs. Apparently the exchange of income for more leisure time is worth it (Louis Harris, p. 2). However, physicians are concerned about loss of autonomy, restrictions on practicing specialties, and the control of medicine by the government and insurance carriers. Still, there is general agreement that a fixed income, reliable working hours, freedom from administrative work, and fringe benefits (including paid vacation, sick leave, and health, life, and malpractice insurance) are attractions for an alternative group practice. Yet some physicians are not pleased by the number of patients they must see in a shortened workday, as well as the "lack of medically interesting cases" (Freeborn, p. 3). Many HMO physicians dislike the typical HMO patient who shows an "over concern with minor symptoms" and doesn't follow the prescribed medical advice

(Freeborn, p. 6). In general, the greater the perceived autonomy, the greater the satisfaction with an HMO.

There seems to be some correlation between specialty and type of practice. According to a study by Dr. Frederic D. Wolinsky and William D. Marder, internists, surgeons, obstetricians, gynecologists, and psychiatrists tend to lean towards solo practice, while pediatricians favor small groups (Med. World News, p. 130).

D. Distinctive Aspects of Dental Practice and Careers

According to the American Dental Association (ADA) 1987 Survey of Dental Practice, the practice trends for dentists differ significantly from those of other specialists in that increasing numbers of dentists are choosing solo practice. In fact, sole proprietorship is the most prevalent form of dentistry practice, with a marked growth in sole proprietorships since 1980 (ADA, Employment Status, p. 15). The second most rapidly growing type of dental practice is ownership as a shareholder in an incorporated practice. Most dentists (82.7 percent) start in a practice as an owner/part-owner, and of those who started as salaried dentists, 68 percent are now owners or part-owners of their practices (ADA, Employment Status, p. 1, 3). Statistics show that "92.9% of all dentists share in the ownership of their current primary practice or are sole owners of their practices" (ADA, Employment Status, p. 3). It appears that dental specialists tend to be shareholders in incorporated practices. Those dentists who do not have practice ownership are younger: 56.1 percent have graduated since 1980; 73.1

percent since 1975; 27 percent before 1975 (ADA, General Characteristics, p. 1).

E. Recruiting Strategies for Physicians and Dentists

In light of the many practice alternatives available to physicians, the issue of recruitment and retention is critical. Given changing patient preferences and increasing practice options, physicians and dentists are looking for maximum benefits and high quality patient populations with minimum risks. In addition, recruitment of top physicians has become big business: "the cost of filling each physician vacancy is approximately $12,000 exclusive of relocation costs and requires 6-18 months with an average of eight months" (Landess, p. 7). Does knowledge of selection motivators lead to less turnover and greater physician satisfaction? What factors will best predict who will be content in a group setting and who will opt for private practice?

Several studies have sought answers to these questions. A study by Mick et al. saw no significant differences in "age, race, sex, or medical training" between those who stayed with HMOs and those who left (Freund and Allen, p. 801). But it appears that the average turnover rate of 3.9 - 6.3 percent (approximately 1 MD per year) is most directly related to the experience in a fee-for-service, hospital-based, or academic position prior to joining a prepaid group (Mick, et al., p. 323). The Health Services Research Center found that the greatest influences on physician satisfaction in groups were the structure and administration, along with the leadership of

specific physicians (Freund and Allen, p. 800). It is clear that "physician peers - other members of their partnership, respected colleagues, and other practitioners in their specialty - have the greatest influence on the physician's decisions," whereas professional endorsements and recruitment representatives have little effect (Freund and Allen, p. 803). A report by Shatin and Rovin concluded that "clinical experience with practitioners . . . during training was considered . . . to be the most important factor in stimulating interest in group practice" (Shatin and Rovin, p. 23). The idea of training as an influential factor is noted by Raymond Fink, Ph.D. when he states that "in training and in outlook they [medical school graduates] are prepared for multispecialty medical group practice" (Robinson and Bingham, p. 18).

Familiar practice style plus salary and benefits have eased the job of the HMO recruiter. However, salary differences still present problems in certain specialties. Obstetrics/Gynecology, Orthopedic Surgery, Anesthesiology, and Neurology are the most difficult specialties for HMOs to recruit, while Internal Medicine is the easiest (Amer. Med. News and Med. Economics). There is a general consensus in the literature about the best sources of recruitment: residency programs, advertisements in professional journals (e.g., Journal of the National Medical Association, Journal of the American Medical Association, American Family Physician, Journal of Family Practice, New England Journal of Medicine); faculty/staff of medical schools and local hospitals; word of mouth; and private practices in the community. Most sources agree that placement agencies are

expensive and are only useful for last minute/specialty shortages. The recruitment process with the best results includes an on-site interview with spouse to make sure both husband and wife are happy with the area. Telephone as well as written references help eliminate hiring mistakes. Matching of personalities and fit with individuals lessens turnover as well. Once hired, thorough orientation and on-going evaluation lead to lower turnover.

It is clear that establishing recruitment procedures and paths for retention is essential for all large organizations, whether hospitals, HMOs, or group private practices. The VA is no exception. In fact, given the specialized patient population at the VA, along with the mixed mission of teaching, research, and patient care, and the age distribution of the VA physicians and dentists (discussed in the following sections), the issues of physician selection and retention are extremely important.

SECTION III: VETERANS ADMINISTRATION MEDICAL WORK FORCE

We discuss characteristics of the VA medical work force using the December 1985 PAID Master File in this section (Note 1). We begin by investigating how VA compensation varies by seniority, specialty, and type of station. We then examine selected relationships in more detail, especially the effect of academic appointments on part-time employment. Our empirical analysis will show that the VA has a compressed, highly uniform pay schedule which treats most full-time physicians and dentists alike, despite widely diverse specialties and geographical locations.

A. Summary of Overall Findings

Perhaps the clearest way to understand general empirical patterns is to consider a large number of variables simultaneously. A standard method for summarizing complex relationships is known as factor analysis. A factor analysis identifies physician and dentist attributes which are closely related and clusters them into separate dimensions or "factors". Variables are highly associated within factors but only weakly associated across factors (Note 2).

The employee attributes utilized in our factor analysis include dichotomous variables (whether employed full-time or part-time, whether or not board certified, whether or not a foreign medical school graduate, whether or not employed in a supervisory capacity, whether or not a faculty member, and whether or not an occupant of the dominant grade, Grade 15). In addition, we include variables

describing the expected training time required in the individual's patient specialty ("Patient Specialty") and characteristics of the station where he or she is employed ("Complexity Level"). The dichotomous variables are self-explanatory, but the specialty and complexity variables deserve special comment. Details of the values of the variables are included in Table III-3.

Patient Specialties. Table III-1 lists the paid assignment codes for each specialty. We grouped the specialties into two broad categories: patient specialties and non-patient specialties. The patient specialties exclude research and administration. For the purposes of this factor analysis, the patient specialty variable measures the approximate years of graduate residency training required for each specialty. We estimated length of residency from the 1988-1989 Directory of Graduate Medical Education Programs, commonly known as the "Green Book."

Station Complexity. VA medical facilities can be described in many different ways. To summarize broad distinctions among the stations, we adopted a tentative index of management complexity developed by the VA's Executive Resources Board (ERB). The ERB complexity index is designed to measure variations in executive skills and resources required to manage a VA medical station. It is used to aid such decisions as determining director, associate director, and associate director trainee assignments. The index summarizes 12 different empirical variables (including number of outpatient visits, level of VA and non-VA research funds, presence of a residency program, and number of patients in domiciliary units),

and it comprises four different levels. Level I is the most complex and level IV is the least complex. Based on the current version of the index (dated October 31, 1986), there are 43 medical stations in level I, 37 in level II, 54 in level III, and 30 in level IV (see Appendix Table A-1 for a list of VA stations organized by complexity levels). Since the complexity index, in its present form, covers VA medical centers only, later tables in this section include information on VA regional centers and out-patient stations.

VA stations exhibit remarkable diversity. Table III-2 summarizes some of the broad differences by level of complexity.

- The proportion of VA stations affiliated with a medical school ranges from 100.0 percent in level I to 32.0 percent in level IV.
- The proportion of VA stations located in a large Standard Metropolitan Statistical Area (SMSA) ranges from 81.4 percent in level I to 4.0 percent in level IV.
- The average number of physicians ranges from 149.4 in level I to 17.8 in level IV.
- The average number of hospital beds ranges from 695.1 in level I to 191.7 in level IV.

Despite these wide variations in size, location, and activities, the last part of Table III-2 suggests a countervailing theme, namely the striking similarities in patient diagnoses. The proportion of medical beds is 50.4 percent in level I and 66.8 percent in level IV. While certain VA stations have a greater proportion of psychiatric beds than others (see, for example, Fort Lyon, Colorado in Appendix Table A-1), most VA hospitals seem to process a fairly homogeneous patient population with relatively little specialization by type of treatment, at least as measured by broad complexity levels (see the

discussion of the VA's mandate for diversified patient care in Section I).

Factor Analysis Results. Table III-3 presents the three major factors for all VA physicians and dentists with patient specialties in complexity levels I through IV. Each factor contains numerical values or "loadings" for the different variables. High loadings, with absolute values of 0.5 or more, indicate closely-related variables; low loadings, with absolute values under 0.2, indicate weakly-related variables; otherwise, the variables have moderate loadings. For convenience, we refer to each factor by the name of its most important variable. Thus,

- Factor I is the seniority dimension with a loading of 0.817 for Years of DMS Service (Seniority Factor);
- Factor II is the specialty dimension with a loading of 0.744 for Years of Patient Specialty Training (Patient Specialty Factor); and
- Factor III is the station dimension with a loading of 0.631 for Complexity Levels (Station Complexity Factor).

Each of these factors represents a different pattern of high and low loadings.

- The Seniority Factor suggests a strong relationship among years of DMS service, age, and supervisory level (i.e., supervisory positions tend to be recruited from physicians and dentists inside the VA, those with the most experience in DMS);
- The Patient Specialty Factor suggests a strong relationship among years of residency training, part-time employment, and board certification (i.e., the longer the residency training, the greater the likelihood of board certification and part-time employment at the VA);

- The Station Complexity Factor suggests a strong relationship among complexity levels, percentage of academic appointments, and percentage of foreign medical graduates (i.e., the higher the level of station complexity, the greater the likelihood of faculty positions and degrees from U.S. and Canadian medical schools).

How do these factors affect VA compensation? Since VA compensation is determined according to criteria such as seniority, supervisory level, and type of specialty, VA compensation should be closely related to Factors I and II, the Seniority and Specialty Factors. Likewise, since years of DMS service and length of specialty training have low loadings on the Complexity Factor (-0.02 and 0.01 respectively), we should find little, if any, variation in VA compensation across complexity levels. To explore the relationship between compensation and the factors identified above, we performed a second factor analysis. This second factor analysis differs from the first in two ways:

1. Inclusion of total compensation as a variable (salary, special pay, and outside remuneration), and
2. Exclusion of part-time employees, since they automatically receive less compensation (Note 3).

Table III-4 summarizes the results of this second factor analysis. As expected, total compensation has high loadings on the Seniority and Specialty Factors and low loadings on the Station Complexity Factor. Total compensation has a loading of 0.517 on the Seniority Factor, a loading of 0.683 on the Specialty Factor, and -0.002 on the Station Complexity Factor. Generalizing from this factor analysis, it appears that the VA compensation system rewards

seniority and advanced graduate training but offers few, if any, incentives based on geographical location and type of station.

Regression Model. How much variability is present in VA compensation? Is the spread in VA compensation large or small? To see the breadth of rewards in the VA, we turn to linear regression which provides a convenient method for summarizing the major components of VA compensation.

We performed a regression analysis relating total compensation for full-time VA physicians and dentists to station complexity, type of specialty (including research and administration), and years of DMS service. Consistent with the factor analyses, the regression analysis shows a substantial impact of seniority and type of specialty on compensation, but little or no impact due to station complexity. See Table A-3 for details of the regression analysis.

Perhaps the most important feature of these results appears in Table III-5. Using the coefficients from the regression equation, we estimated the average total annual compensation by levels of seniority and types of specialties. As expected, the difference in average total compensation between the upper and lower complexity levels is quite small, less than $500 a year ($79,206 for complexity levels I and II minus $78,707 for complexity levels III and IV). What is perhaps even more striking is the small amount of variability in compensation across years of seniority and type of specialty.

Spread in Compensation. The spread in average total compensation between high and low seniority is less than $15,000 a year ($14,780). This difference results from the average total compensation for full-

time physicians and dentists with 20 or more years of DMS service: $84,329, minus $69,549 a year for staff members with one or fewer years of DMS service.

In addition, total compensation increases only during the initial years of service and remains relatively stable with increased seniority. The percent growth in total compensation is 10.0 percent from the first level (years 0-1) to the second level (years 2-4) and 0.9 percent from the third level (years 10-19) to the fourth level (years 20 or more). Recall that the overall range in compensation from entry-level employees to those with over 20 years of service is $14,780 ($84,429 minus $69,549). To receive almost one-half the total difference, $7,390 per year, requires at most four years of DMS service.

The spread in average total compensation between high and low physician patient specialties is even smaller. The annual difference between radiology ($86,329) and general internal medicine ($78,029) is $8,300 a year. The major difference in total compensation occurs between physicians and dentists. Viewing dentistry as a type of medical specialty, a general dentist averages $61,007 a year, approximately $17,000 less than a general practice physician. We will relate VA salary differences to compensation patterns outside the VA in Section V.

Refinements of the Factor Analysis. In the remainder of this section, we examine selected tables, concentrating primarily on particular specialties and certain patterns which are restricted to individual complexity levels. As a general rule, the tables confirm

the overall patterns from the factor analyses, but they suggest several areas where the factor interpretations need to be refined and qualified. Factor analyses tend to oversimplify at least two kinds of situations:

1. Middle range associations and
2. Variables with multiple categories.

Factor analysis works best at the extremes, highlighting variables with very high or very low correlations. When variables have mixed relationships (some with close ties and others with moderate ties), the method tends to exaggerate the differences, "pushing" a variable in the direction of its strongest relationships. Thus, while part-time employment is clearly related to type of specialty, we also find some important variations by level of complexity.

Factor analysis is easiest to interpret when the variables are moderately continuous (like age and seniority) or have two discrete categories (like "yes" and "no"). The results become more problematic when a variable has multiple categories that can be ordered in several different ways. Thus, we define additional constructs, other than approximate years of residency training, that show more striking variations across levels of complexity.

We have organized the tables around the dominant factors--seniority, specialty, and station complexity. Within each of these areas, we present tables collaborating the factor analyses, and others refining the factor analysis results. Supplementary tables, not discussed in the text, are presented in the Appendix.

B. VA Work Force by Level of Seniority

Certain characteristics of VA Seniority are clear-cut.

- Years of DMS Service are almost identical across the four levels of station complexity. DMS service averages 7.56 years in level I and 7.62 years in level IV. In level I, 32.09 percent (24.40 plus 7.69) of the staff have 10 or more years of DMS service, compared to 33.67 percent (8.02 plus 25.65) in level IV (see Table III-6).

- Supervisory authority is a direct function of seniority. As the length of DMS service increases from one year to twenty years, the proportion of staff members with a supervisory position increases from 5.69 percent to 51.46 percent (see Table III-7).

What is less obvious is the distribution of seniority within specialties. Table III-8 shows length of DMS service by type of specialty. The physician specialties generally present a mixed picture--an average of 5.76 years for special surgery, 7.33 years for radiology, and 9.67 years for pathology. Perhaps the most striking finding is the high seniority for dentists--an average of slightly over 11 years for both general dentists and specialized dentists. Not only do dentists have more DMS seniority than physicians, but very few dentists enter DMS after age 55. Tables III-9 and III-10 show the length of DMS service by age separately for physicians and dentists. Among physicians 55 years of age or older, 18.3 percent (604 of 3,306) have less than 5 years of DMS service. By contrast, among VA dentists 55 years of age or older, only 3.4 percent (6 of 175) have less than 5 years of DMS service.

Notice also the difference in the proportion of older physicians and dentists. Approximately 8 percent (8.20 percent) of the

physicians are 65 years of age or older, whereas only 1.63 percent of the dentists are 65 years of age or older. This suggests different career routes for VA physicians and dentists: physicians are more likely to join the VA late in life; dentists are more likely to remain with the VA until retirement.

C. VA Work Force by Type of Specialty

Consistent with the VA's commitment to total patient care (discussed in Section II), the VA covers a wide range of medical specialties, but there appears to be minimal variation among specialties by age of physician (see Table III-11). The average of the VA medical staff members ranges from 44.03 years of age in specialized internal medicine to 48.80 years of age in pathology. Perhaps the most noticeable aspect of the VA age distribution occurs in the non-patient specialties, research and administration. VA researchers average 38.03 years of age, with only 2.06 percent over 64 years of age. VA administrators, however, average 53.42 years of age with 16.50 percent over 64 years of age. The projected changes in the VA retirement system are likely to have a major impact on senior management officials.

Likewise, there are few variations in the proportion of academic appointments across specialties (see Table III-12). Approximately two-fifths (40.35 percent) of the VA medical staff have academic appointments. Faculty representation is fairly uniform across most specialties. The major exceptions are general dentistry and general internal medicine. Only about one-fifth of the general dentists and

general internists are faculty members (22.09 percent and 23.89 percent, respectively). Otherwise, the proportion of academic appointments is moderately constant, varying from 51.59 percent for specialized surgery to 37.22 percent for psychiatry/neurology. Although we do not have figures on VA residency programs by type of specialty, the VA's graduate training program, as indicated by joint faculty appointments, seems to be fairly balanced across different fields.

Certain relationships seem to be specialty-specific. For example:

- Approximately two-thirds (63.82 percent) of VA physicians and dentists are board certified (see Table III-13).
- Approximately one-fourth (27.81 percent) of VA physicians and dentists are foreign medical graduates (see Table III-14).

Excluding dentistry, the highest percentages of board certified specialties are pathology (89.34 percent) and radiology (79.93 percent), while the lowest percentages are anesthesiology (51.71 percent) and psychiatry/neurology (55.65 percent). Board certification clearly varies by type of specialty, yet there is no obvious relationship to length of graduate physician training (comparison of Tables III-3 and III-13).

Excluding dentistry, the lowest percentages of foreign medical graduates (FMGs) occur in specialized surgery (16.60 percent) and general surgery (20.81 percent). The highest percentages of FMGs are found in anesthesiology (47.04 percent) and pathology (44.58 percent).

Part-time versus Full-time Employment. Table III-15 shows vast specialty differences in the proportion of physicians employed full-time versus part-time. The proportion of non-dental physicians employed part-time ranges from 83.75 percent (special surgery) to 36.76 percent (anesthesiology) to 21.85 percent (pathology). Part of the explanation for this relationship is likely to be the amount of money a physician can earn in private practice. Since part-time VA staff members have fewer restrictions on external remuneration, there is likely to be a strong incentive for physicians in the highly compensated specialties to remain in part-time employment.

Outside compensation, however, is not likely to be the only explanation for part-time employment. Certain specialties, such as pathology and, to a lesser extent, radiology and anesthesiology, are primarily hospital-based occupations, providing services to other physicians. We suspect that these specialties are often organized on a full-time basis, regardless of compensation levels outside the VA.

Why the VA should have such a high proportion of full-time dentists (97.05 percent and 91.04 percent, respectively, for general and specialized dentists) is unclear. There is apparently no official VA policy prohibiting part-time dentists, so the reasons for this pattern are likely to represent a combination of factors. For example, dentistry requires relatively high start-up costs for capital equipment, which may discourage easy entry into private practice. Also, most dental offices are organized as solo practices (see Section II). Without team backups, part-time practitioners may find it difficult to cover patient emergencies and schedule

conflicts. Finally, the market for dental services in many areas is highly competitive, particularly in large urban areas. This competitive market undoubtedly increases the risks of starting new practice. Coupled with licensure requirements, usually established on a state-by-state basis with no automatic transfer of licenses from one state to another, dentists may find full-time VA employment an attractive alternative.

D. VA Work Force by Type of Station

As suggested by the Station Complexity Factor (Factor III of the factor analysis), there is some evidence that stations in complexity levels I and II look for different kinds of recruiting qualifications than stations in complexity levels III and IV.

- The proportion of VA physicians and dentists with faculty appointments ranges from 47.60 percent in level I to 8.00 percent in level IV (see Table III-16).
- The proportion of VA physicians and dentists with foreign medical degrees ranges from 23.79 percent in level I to 42.60 percent in level IV (see Table III-17).
- The proportion of VA physicians and dentists with board certification ranges from 68.59 percent in level II to 49.20 percent in level IV (see Table III-18).
- The average age of VA physicians and dentists increases from 45.27 years in level I to 50.65 years in level IV (see Table III-19).

While such characteristics as board certification may or may not be related to quality of patient care, they may indicate a greater emphasis on teaching and research in levels I and II.

Patient Specialties by Complexity Level. Certain specialties are fairly constant across complexity levels. For example, the overall

ratio of physicians to dentists in Table III-20 is about 13:1 (93.02 percent physicians and 6.98 percent dentists). This ratio is fairly constant across the four complexity levels. Complexity levels I and II have the largest proportion of physicians (approximately 93 percent), while the regional centers and out-patient stations have the smallest proportion of physicians (approximately 85 percent). Likewise, the proportions of general surgeons, anesthesiologists, pathologists, and radiologists are similar across station levels (Table III-21).

In order to understand differences in specialties across complexity levels, it is helpful to re-group the specialties (excluding research and administration). For example:

- Combining the special sub-specialties of specialized surgery, specialized internal medicine, and specialized dentistry, approximately 39.0 percent of the medical staff in complexity levels I and II practice these special sub-specialties, compared to only 18.5 percent of the medical staff in complexity levels III and IV.

- Combining the general sub-specialties of general surgery, general internal medicine, and general dentistry, approximately 23.0 percent of the medical staff in complexity levels I and II practice these general sub-specialties, compared to 45.0 percent of the medical staff in complexity levels III and IV.

- Combining specialties requiring the longest residency programs (see Table III-3), approximately 43.5 percent of the medical staff in complexity levels I and II practice specialized surgery, general surgery, or specialized internal medicine, compared to 24.0 percent of the medical staff in complexity levels III and IV.

Based on these calculations, it appears that complexity levels I and II tend to have more specialized practices than complexity levels III

and IV.

We also examined variations in part-time employment by complexity levels. Recall that the factor analyses allocated "Duty Status" to the Specialty Factor rather than the Complexity Factor, suggesting part-time versus full-time employment is strongly related to type of specialty. However, station complexity has a secondary impact on part-time employment. Table III-22 shows that the proportion of part-time employment decreases from 45.79 percent in level I to 6.80 percent in level IV.

To measure the relative impact of complexity levels on part-time employment, we used a statistical procedure known as multivariate chi-square (also called log-linear analysis). A multivariate chi-square shows how much variation in part-time employment is due to various explanatory variables. Table A-9 lists the three explanatory variables used in our analysis: patient specialties (symbolized by "S"), complexity levels (symbolized by "L"), and the presence or absence of an academic appointment (symbolized by "A"). The dependent variable, employment duty status, is symbolized by "D." To simplify the exposition, we systematically add these explanatory variables one step at a time, emphasizing the models which are the easiest to interpret and show the largest increases in explained variation. Readers familiar with log-linear techniques should consult Table A-10 for a summary of the statistical details.

Consistent with the factor analysis, we find that medical specialty provides the single most important predictor of part-time employment. Almost two-thirds (63.84 percent) of the variation in

part-time employment can be accounted for by the specialty variable alone (the "SD" term in model 4, Table A-10). The next most important variable is complexity level. Adding complexity levels to the specialty model increases the proportion of explained variation to 86.07 percent, a gain of slightly over 22 percent (the "LD" term in model 7, Table A-10).

The effect of complexity levels also varies within different specialties. Table A-11 presents the expected ratio of full-time to part-time employment (full-time employment/part-time employment) for selected log-linear models. An expected ratio greater than 1.0 indicates a preponderance of full-time employment, and an expected ratio less than 1.0 indicates a preponderance of part-time employment. Model 4 has a specialty effect but no complexity effect. Surgery shows a preponderance of part-time employment (a full-time to part-time ratio of 0.35), and dentistry shows a preponderance of full-time employment (a full-time to part-time ratio of 19.10). In Model 7 every specialty has the same complexity effect (technically known as a main effects relationship), and in Model 11 the complexity effect varies from specialty to specialty (technically known as an interaction relationship). When each specialty has a different complexity effect (the "LSD" term in Model 11), the spread between the complexity levels increases for some specialties and decreases for other specialties. For example, in Model 7 the ratio of expected values between the complexity levels is approximately the same for all specialties. The ratio between complexity levels is 0.24 (0.27 to 1.14) for surgery and 0.24 (1.96 to 8.24) for anesthesiology,

radiology, and pathology. In Model 11 the ratio of expected values between the complexity levels is 0.08 (0.22 to 2.79) for surgery and 0.42 (2.06 to 4.93) for anesthesiology, radiology, and pathology.

Notice how the expected ratio of full-time to part-time employment in complexity levels III and IV shifts from Model 7 to Model 11 in Table A-11. The ratio increases from 1.14 to 2.79 for surgeons (indicating a greater likelihood of full-time employment), and it decreases from 8.24 to 4.93 for anesthesiologists, radiologists, and pathologists (indicating a smaller likelihood of full-time employment). Thus, for stations in complexity levels III and IV, surgeons are more likely to be full-time employees and the anesthesiologists, radiologists, and pathologists are less likely to be full-time employees (compared to a hypothetical constant complexity effect of 0.24 in each specialty).

Perhaps the most important aspect of the multivariate chi-square analysis concerns the effect of academic appointments on part-time employment. VA staff members with academic appointments are much more likely to be employed part-time than full-time. Adding academic appointments to the main effects model increases the proportion of explained variation to 95.61 percent, a gain of 9.5 percent (the "AD" term in Model 8, Table A-10). Adding academic appointments to the interactive model increases the proportion of explained variation to 98.64 percent, a gain of 9.2 percent (the "AD" term in Model 14, Table A-10). Within the different complexity levels and types of specialties, faculty members are about twice as likely to be part-time VA employees as non-faculty members. For example, the ratio of

expected values between the absence and presence of academic appointments in the surgical specialties is 2.1 (0.31 to 0.15) for complexity levels I and II and 2.0 (3.17 to 1.55) for complexity levels III and IV. Likewise, the ratio of expected values between the absence and presence of academic appointments in anesthesiology, radiology, and pathology is 2.1 (2.96 to 1.44) for complexity levels I and II and 2.1 (5.75 to 2.79) for complexity levels III and IV. In other words, the effect of academic appointments on part-time employment remains the same, regardless of specialties or complexity levels.

E. Conclusion

We have examined the empirical relationships among the various components of VA compensation, with emphasis on seniority, medical specialties, and geographical location. We have learned several things:

- Supervisory positions are closely related to years of DMS service.
- Length of graduate specialty training increases the likelihood of part-time VA employment.
- The greater the level of a station's management complexity, the greater the involvement with affiliated medical schools and faculty.
- VA compensation for full-time physicians and dentists is highly uniform across widely diverse specialties and geographical locations.

We have also learned the importance of studying specific staffing patterns. Some variables, such as seniority, show little or no variation across specialties or complexity levels. Other variables,

such as part-time employment, vary across both specialties and complexity levels, and within specialties, from one complexity level to another. Still other variables, such as academic appointments, exert small but consistent influences regardless of specialties or complexity levels.

In order to understand the specific labor markets used by the VA, we next describe data from the 17-5 Physician Staffing Survey.

TABLE III-1

DESCRIPTION OF PHYSICIAN SPECIALTY CATEGORIES
BY PAID ASSIGNMENT CODES

PATIENT SPECIALTIES:

1) SPECIALIZED SURGERY:
   3: Gynecology
   4: Neurosurgery
   6: Ophthalmology
   7: Orthopedic Surgery
   8: Otolaryngology
   9: Plastic Surgery
  10: Colon and Rectal Surgery
  11: Thoracic Surgery
  12: Urology

2) GENERAL SURGERY:
   2: Surgery

3) SPECIALIZED INTERNAL MEDICINE:
   5: Medical Ontology
  18: Hematology
  19: Infectious Diseases
  22: Other Medicine
  23: Allergy and Immunology
  24: Cardiovascular Disease
  25: Gastroenterology
  26: Pulmonary Diseases
  27: Nephrology
  28: Rheumatology
  29: Endocrinology and Metabolism
  34: Geriatric Fellow

4) ANESTHESIOLOGY:
   1: Anesthesiology

5) PSYCHIATRY/NEUROLOGY:
  30: Neurology
  31: Psychiatry

6) PATHOLOGY:
  32: Anatomic Pathology
  33: Clinical Pathology
  43: Pathology

7) RADIOLOGY:
   38: Diagnostic Radiology
   39: Therapeutic Radiology
   45: Therapeutic and Diagnostic Radiology
   46: Nuclear Medicine

8) GENERAL INTERNAL MEDICINE:
   21: General Internal Medicine
   41: General Practice
   49: Family Practice

9) OTHER:
   17: Substance Abuse Fellow
   20: Dermatology
   36: Preventive Medicine
   37: Spinal Cord Injury Fellow
   42: Paraplegia
   44: Physical Medicine and Rehabilitation

NON-PATIENT SPECIALTIES:

10) RESEARCH:
   35: Clinical Scholar
   40: Clinical Investigator
   47: Research Associate
   48: Research

11) ADMINISTRATION:
   50: Admitting Physician
   51: Chief of Staff
   52: Chief of Staff Trainee
   53: ACOS-Education
   54: ACOS-Research and Development
   55: Medical Center Director
   56: Physicians in VACO
   57: Other
   58: Assistant Chief of Staff
   59: ACOS-Ambulatory Care

TABLE III-2

SELECTED COMPLEXITY DIMENSIONS

COMPLEXITY DIMENSIONS	STATION COMPLEXITY LEVELS I	II	III	IV	TOTAL
NUMBER OF STATIONS	43	37	54	25	159
PERCENT AFFILIATED WITH MEDICAL SCHOOL	100.0%	100.0%	70.4%	32.0%	79.2%
GEOGRAPHICAL LOCATION					
PERCENT LARGE SMSA	81.4%	32.4%	18.5%	4.0%	36.5%
PERCENT SMALL SMSA	16.3%	37.8%	9.3%	8.0%	17.6%
PERCENT NON-SMSA	23.3%	29.7%	72.2%	88.0%	45.9%
AVERAGE NUMBER OF PHYSICIANS	149.4	85.9	38.2	17.8	76.2
AVERAGE NUMBER OF BEDS	695.1	434.8	471.3	191.7	479.0
PATIENT CARE					
PERCENT BEDS MEDICAL	50.4%	49.7%	51.3%	66.8%	51.6%
PERCENT BEDS SURGICAL	24.6%	27.3%	7.8%	14.5%	18.9%
PERCENT BEDS PSYCHIATRIC	25.0%	22.9%	40.9%	18.5%	29.5%

Sources:

Number of Stations: Memorandum from the Director, Management Support Office (10N), December 26, 1986.
Proportion Affiliated with Medical Schools: Memorandum from the Director, Management Support Office (10N), December 26, 1986.
Geographical Location: Information supplied by Dr. Richard Wilke, American Medical Association, October 27, 1988.
Average Number of Physicians: Paid Master File for December 1985
Average Number of Beds, Patient Care: Administration of Veterans Affairs, Annual Report 1987, Table 10, pp. 180-182.

TABLE III-3

FACTOR ANALYSIS OF ALL PHYSICIANS AND DENTISTS
WITH PATIENT SPECIALTIES
PAID MASTER FILE FOR DECEMBER 1985

VARIABLE DEFINITIONS	VALUE	
	1	2
BOARD CERTIFICATION	NO	YES
DUTY STATUS	FULL-TIME	PART-TIME
FOREIGN MEDICAL GRADUATE	NO	YES
ACADEMIC APPOINTMENT	NO	YES
GRADE LEVEL	OTHER	15
SUPERVISORY LEVEL	NO	YES
STATION COMPLEXITY		
LEVEL I	1	
LEVEL II	2	
LEVEL III	3	
LEVEL IV	4	
PATIENT SPECIALTY		
YEARS OF GRADUATE TRAINING		
SPECIAL SURGERY	6.0	
GENERAL SURGERY	5.0	
SPECIAL INTERNAL	5.0	
ANESTHESIOLOGY	4.0	
PSYCHIATRY/NEUROLOGY	4.0	
PATHOLOGY	3.5	
RADIOLOGY	3.0	
GENERAL INTERNAL	3.0	
SPECIAL DENTISTRY	2.0	
GENERAL DENTISTRY	1.0	
OTHER	3.0	

VARIMAX ROTATED FACTOR PATTERN

	FACTOR 1 SENIORITY	FACTOR 2 SPECIALTY	FACTOR 3 COMPLEXITY
COMPLEXITY LEVEL	0.09798	-0.16648	0.63148
YEARS OF SPECIALTY TRAINING	-0.16674	0.74435	0.00702
AGE	0.75721	0.04395	0.20815
YEARS IN DMS SERVICE	0.81746	-0.06454	-0.02089
DUTY	-0.37776	0.56529	-0.31570
BOARD CERTIFICATION	0.18619	0.62471	-0.13215
FOREIGN MEDICAL GRADUATES	0.02422	0.09774	0.71583
ACADEMIC APPOINTMENTS	0.19753	0.37483	-0.53511
GRADE LEVEL	0.53401	0.44182	0.11732
SUPERVISORY LEVEL	0.59115	-0.08897	-0.17529
	FACTOR1	FACTOR2	FACTOR3
VARIANCE EXPLAINED BY EACH FACTOR	2.13061	1.65086	1.40296

TABLE III-4

FACTOR ANALYSIS OF FULL-TIME PHYSICIANS AND DENTISTS
WITH PATIENT SPECIALTIES
PAID MASTER FILE FOR DECEMBER 1985

VARIABLE DEFINITIONS	VALUE	
	1	2
BOARD CERTIFICATION	NO	YES
DUTY STATUS	FULL-TIME	PART-TIME
FOREIGN MEDICAL GRADUATE	NO	YES
ACADEMIC APPOINTMENT	NO	YES
GRADE LEVEL	OTHER	15
SUPERVISORY LEVEL	NO	YES
COMPLEXITY LEVEL		
LEVEL I	1	
LEVEL II	2	
LEVEL III	3	
LEVEL IV	4	
PATIENT SPECIALTY		
YEARS OF GRADUATE TRAINING		
SPECIAL SURGERY	6.0	
GENERAL SURGERY	5.0	
SPECIAL INTERNAL	5.0	
ANESTHESIOLOGY	4.0	
PSYCHIATRY/NEUROLOGY	4.0	
PATHOLOGY	3.5	
RADIOLOGY	3.0	
GENERAL INTERNAL	3.0	
SPECIAL DENTISTRY	2.0	
GENERAL DENTISTRY	1.0	
OTHER	3.0	

VARIMAX ROTATED FACTOR PATTERN

	FACTOR 1 SENIORITY	FACTOR 2 SPECIALTY	FACTOR 3 COMPLEXITY
COMPLEXITY LEVEL	0.10746	-0.12624	0.67661
YEARS OF SPECIALTY TRAINING	-0.09752	0.72066	0.08660
AGE	0.80499	0.01644	0.18799
YEARS IN DMS SERVICE	0.83430	-0.06812	-0.09955
BOARD CERTIFICATION	0.04371	0.71163	-0.24071
FOREIGN MEDICAL GRADUATES	-0.02490	0.24302	0.63244
ACADEMIC APPOINTMENTS	0.23532	0.21727	-0.61790
GRADE LEVEL	0.52495	0.45836	0.02808
SUPERVISORY LEVEL	0.53319	0.08371	-0.20228
TOTAL COMPENSATION (SALARY, SPECIAL PAY, AND OUTSIDE REMUNERATION)	0.51782	0.68340	-0.00211
	FACTOR1	FACTOR2	FACTOR3
VARIANCE EXPLAINED BY EACH FACTOR	2.25103	1.83703	1.39199

TABLE III-5

ESTIMATED LEAST SQUARE MEANS FOR TOTAL COMPENSATION*
COMPLEXITY LEVEL BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

COMPLEXITY LEVEL	SPECIALTY												
	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/ NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
I AND II	83583	85995	79569	87585	80158	84941	86650	78364	66895	60499	81817	68398	85223	79206
III AND IV	81792	85144	78754	82248	78892	86179	86008	77694	65909	61515	83531	74515	85006	78707
OVERALL	82687	83569	79161	84917	79525	85560	86329	78029	66402	61007	82674	71457	85115	

COMPLEXITY LEVEL BY YEARS OF SERVICE IN DEPARTMENT OF MEDICINE AND SURGERY

COMPLEXITY LEVEL	YEARS OF SERVICE					
	0-1	2-4	5-9	10-19	20 +	TOTAL
I AND II	67326	76405	81886	85039	85375	79206
III AND IV	71773	76614	79807	82056	83284	78707
OVERALL	69549	76510	80846	83547	84329	

*MEANS ESTIMATED FROM REGRESSION ANALYSIS, TABLE A-2.

TABLE III-6

YEARS OF SERVICE IN DEPARTMENT OF MEDICINE AND SURGERY BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

YEARS OF SERVICE	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
0-1 YRS	1566	785	387	111	6	32	2887
	23.03	23.30	17.05	22.24	8.82	16.00	21.86
2-4 YRS	1378	688	456	104	13	38	2677
	20.27	20.42	20.09	20.84	19.12	19.00	20.27
5-9 YRS	1673	905	670	116	16	49	3429
	24.61	26.86	29.52	23.25	23.53	24.50	25.97
10-19 YRS	1659	772	579	128	27	61	3226
	24.40	22.91	25.51	25.65	39.71	30.50	24.43
>·19 YRS	523	219	178	40	6	20	986
	7.69	6.50	7.84	8.02	8.82	10.00	7.47
TOTAL	6799	3369	2270	499	68	200	13205
ROW PERCENT	51.49	25.51	17.19	3.78	0.51	1.51	100.00
MEAN YEARS	7.56	7.24	8.06	7.62	9.98	9.28	

FREQUENCY MISSING = 63

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TABLE III-7

STAFF SUPERVISORY LEVEL BY YEARS OF SERVICE IN DEPARTMENT OF MEDICINE AND SURGERY
PAID MASTER FILE FOR DECEMBER 1985

SUPERVISORY LEVEL / FREQUENCY / COLUMN PERCENT	YEARS OF SERVICE 0-1 YRS	2-4 YRS	5-9 YRS	10-19 YRS	> 19 YRS	TOTAL
NO	2687	2333	2669	2133	466	10288
	94.31	88.84	79.34	67.97	48.54	79.52
YES	162	293	695	1005	494	2649
	5.69	11.16	20.66	32.03	51.46	20.48
TOTAL	2849	2626	3364	3138	960	12937
ROW PERCENT	22.02	20.30	26.00	24.26	7.42	100.00

FREQUENCY MISSING = 60

TABLE III-8

YEARS OF SERVICE IN DEPARTMENT OF MEDICINE AND SURGERY BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

YEARS OF SERVICE — SPECIALTY

FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
0-1 YRS	428	217	553	86	442	76	194	506	27	37	133	99	48	2846
	29.70	25.17	22.41	26.96	19.29	13.29	22.72	26.89	10.19	6.08	24.58	41.60	8.18	22.01
2-4 YRS	336	169	456	83	463	95	169	490	42	67	117	68	69	2624
	23.32	19.61	18.48	26.02	20.21	16.61	19.79	26.04	15.85	11.00	21.63	28.57	11.75	20.30
5-9 YRS	370	209	646	65	710	136	241	443	56	146	140	46	156	3364
	25.68	24.25	26.18	20.38	30.99	23.78	28.22	23.54	21.13	23.97	25.88	19.33	26.58	26.02
10-19 YRS	254	173	609	63	532	202	186	369	103	299	109	17	219	3135
	17.63	20.07	24.68	19.75	23.22	35.31	21.78	19.61	38.87	49.10	20.15	7.14	37.31	24.25
> 19 YRS	53	94	204	22	144	63	64	74	37	60	42	8	95	960
	3.68	10.90	8.27	6.90	6.29	11.01	7.49	3.93	13.96	9.85	7.76	3.36	16.18	7.43
TOTAL	1441	862	2468	319	2291	572	854	1882	265	609	541	238	587	12929
ROW PERCENT	11.15	6.67	19.09	2.47	17.72	4.42	6.61	14.56	2.05	4.71	4.18	1.84	4.54	100.00
MEAN YEARS	5.76	7.80	7.88	6.55	7.46	9.47	7.33	5.86	11.09	11.11	7.29	4.19	11.55	

FREQUENCY MISSING = 62

TABLE III-9

PHYSICIANS: AGE OF STAFF BY YEARS OF SERVICE
IN DEPARTMENT OF MEDICINE AND SURGERY
PAID MASTER FILE FOR DECEMBER 1985

AGE	YEARS OF SERVICE					
FREQUENCY / COLUMN PERCENT	0-1 YRS	2-4 YRS	5-9 YRS	10-19 YRS	> 19 YRS	TOTAL
< 35	1257	519	75	1	0	1852
YRS	44.69	20.23	2.33	0.04	0.00	15.08
35 - 44	1036	1291	1617	427	0	4371
YRS	36.83	50.33	50.26	15.22	0.00	35.59
45 - 54	294	377	756	1237	90	2754
YRS	10.45	14.70	23.50	44.10	10.19	22.42
55 - 64	174	270	535	810	510	2299
YRS	6.19	10.53	16.63	28.88	57.76	18.72
> 64	52	108	234	330	283	1007
YRS	1.85	4.21	7.27	11.76	32.05	8.20
TOTAL	2813	2565	3217	2805	883	12283
ROW PERCENT	22.90	20.88	26.19	22.84	7.19	100.00

FREQUENCY MISSING = 59

TABLE III-10

DENTISTS: AGE OF STAFF BY YEARS OF SERVICE
IN DEPARTMENT OF MEDICINE AND SURGERY
PAID MASTER FILE FOR DECEMBER 1985

AGE / YEARS OF SERVICE	0-1 YRS	2-4 YRS	5-9 YRS	10-19 YRS	> 19 YRS	TOTAL
< 35	37	45	25	1	0	108
	50.00	40.18	11.79	0.24	0.00	11.73
35 - 44	27	48	134	163	1	373
	36.49	42.86	63.21	38.81	0.97	40.50
45 - 54	10	13	40	171	31	265
	13.51	11.61	18.87	40.71	30.10	28.77
55 - 64	0	5	12	82	61	160
	0.00	4.46	5.66	19.52	59.22	17.37
> 64	0	1	1	3	10	15
	0.00	0.89	0.47	0.71	9.71	1.63
TOTAL	74	112	212	420	103	921
ROW PERCENT	8.03	12.16	23.02	45.60	11.18	100.00

FREQUENCY MISSING = 5

TABLE III-11

AGE OF MEDICAL STAFF BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

AGE	SPECIALTY												
FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
< 35 YRS	248	118	440	67	229	46	89	429	31	69	73	92	39	1970
	17.16	13.64	17.76	20.87	9.96	8.04	10.39	22.63	11.57	11.29	13.39	37.86	6.63	15.17
35 - 44 YRS	553	328	1031	87	815	176	319	616	112	244	200	119	113	4713
	38.27	37.92	41.62	27.10	35.43	30.77	37.22	32.49	41.79	39.93	36.70	48.97	19.22	36.29
45 - 54 YRS	289	181	592	80	579	172	213	338	72	181	108	21	131	2957
	20.00	20.92	23.90	24.92	25.17	30.07	24.85	17.83	26.87	29.62	19.82	8.64	22.28	22.77
55 - 64 YRS	216	152	316	72	499	139	163	340	47	108	119	6	208	2385
	14.95	17.57	12.76	22.43	21.70	24.30	19.02	17.93	17.54	17.68	21.83	2.47	35.37	18.36
> 64 YRS	139	86	98	15	178	39	73	173	6	9	45	5	97	963
	9.62	9.94	3.96	4.67	7.74	6.82	8.52	9.12	2.24	1.47	8.26	2.06	16.50	18.36
TOTAL	1445	865	2477	321	2300	572	857	1896	268	611	545	243	588	12988
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00
MEAN AGE (YRS)	45.90	46.86	44.03	46.23	47.75	48.80	47.54	45.57	45.54	45.51	47.09	38.03	53.42	

FREQUENCY MISSING = 9

TABLE III-12

STAFF ACADEMIC APPOINTMENTS BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

ACADEMIC APPOINTMENTS / FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
NO	700	456	1257	180	1444	292	528	1443	157	476	331	160	326	7748
	48.41	52.72	50.75	56.07	62.78	51.05	61.61	76.11	58.58	77.91	60.73	65.84	55.10	59.65
YES	746	409	1220	141	856	280	329	453	111	135	214	83	264	5241
	51.59	47.28	49.25	43.93	37.22	48.95	38.39	23.89	41.42	22.09	39.27	34.16	44.90	40.35
TOTAL	1446	865	2477	321	2300	572	857	1896	268	611	545	243	588	12989
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00

FREQUENCY MISSING = 8

TABLE III-13

STAFF BOARD CERTIFICATION BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

BOARD CERTIFICATION	SPECIALTY													
FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
NO	373	213	675	155	1020	61	172	828	172	587	177	72	195	4700
	25.80	24.62	27.25	48.29	44.35	10.66	20.07	43.67	64.18	96.07	32.48	29.63	33.16	36.18
YES	1073	652	1802	166	1280	511	685	1068	96	24	368	171	393	8289
	74.20	75.38	72.75	51.71	55.65	89.34	79.93	56.33	35.82	3.93	67.52	70.37	66.84	63.82
TOTAL	1446	865	2477	321	2300	572	857	1896	268	611	545	243	588	12989
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00
EXPECTED YEARS OF GRADUATE TRAINING	6.0	5.0	5.0	4.0	4.0	3.5	3.0	3.0	2.0	1.0	3.0			

FREQUENCY MISSING = 8

TABLE III-14

STAFF FOREIGN MEDICAL GRADUATES BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

FOREIGN MEDICAL GRADUATES	SPECIALTY												
FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
NO	1206	685	1853	170	1506	317	504	1273	265	609	288	223	478	9377
	83.40	79.19	74.81	52.96	65.48	55.42	58.81	67.14	98.88	99.67	52.84	91.77	81.29	72.19
YES	240	180	624	151	794	255	353	623	3	2	257	20	110	3612
	16.60	20.81	25.19	47.04	34.52	44.58	41.19	32.86	1.12	0.33	47.16	8.23	18.71	27.81
TOTAL	1446	865	2477	321	2300	572	857	1896	268	611	545	243	588	12989
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00

FREQUENCY MISSING = 8

TABLE III-15

FULL-TIME AND PART-TIME MEDICAL STAFF BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

DUTY FREQUENCY / COLUMN PERCENT	SPECIALTY												
	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
FULL TIME	235	365	1352	203	1441	447	571	1384	244	593	328	233	512	7908
	16.25	42.20	54.58	63.24	62.65	78.15	66.63	73.00	91.04	97.05	60.18	95.88	87.07	60.88
PART TIME	1211	500	1125	118	859	125	286	512	24	18	217	10	76	5081
	83.75	57.80	45.42	36.76	37.35	21.85	33.37	27.00	8.96	2.95	39.82	4.12	12.93	39.12
TOTAL	1446	865	2477	321	2300	572	857	1896	268	611	545	243	588	12989
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00

FREQUENCY MISSING = 8

TABLE III-16

STAFF ACADEMIC APPOINTMENTS BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

ACADEMIC APPOINTMENTS	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
NO	3584	1868	1842	460	40	145	7939
	52.40	55.20	81.04	92.00	57.97	71.78	59.84
YES	3256	1516	431	40	29	57	5329
	47.60	44.80	18.96	8.00	42.03	28.22	40.16
TOTAL	6840	3384	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

TABLE III-17

FOREIGN MEDICAL GRADUATES BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

FOREIGN MEDICAL GRADUATES	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
NO	5213	2548	1334	287	59	160	9601
	76.21	75.30	58.69	57.40	85.51	79.21	72.36
YES	1627	836	939	213	10	42	3667
	23.79	24.70	41.31	42.60	14.49	20.79	27.64
TOTAL	6840	3384	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

TABLE III-18

BOARD CERTIFICATION BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

BOARD CERTIFICATION	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
NO	2337	1063	1048	254	25	80	4807
	34.17	31.41	46.11	50.80	36.23	39.60	36.23
YES	4503	2321	1225	246	44	122	8461
	65.83	68.59	53.89	49.20	63.77	60.40	63.77
TOTAL	6840	3384	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

TABLE III-19

AGE OF MEDICAL STAFF BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

AGE	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
< 35	1183	558	192	40	1	14	1988
YRS	17.30	16.49	8.45	8.00	1.45	6.93	14.98
35 - 44	2632	1322	635	125	13	40	4767
YRS	38.49	39.07	27.94	25.00	18.84	19.80	35.93
45 - 54	1515	720	590	135	21	44	3025
YRS	22.15	21.28	25.96	27.00	30.43	21.78	22.00
55 - 64	1060	564	618	144	26	52	2464
YRS	15.50	16.67	27.19	28.80	37.68	25.74	18.57
> 64	449	220	238	56	8	52	1023
YRS	6.57	6.50	10.47	11.20	11.59	25.74	7.71
TOTAL	6839	3384	2273	500	69	202	13267
ROW PERCENT	51.55	25.51	17.13	3.77	0.52	1.52	100.00
MEAN AGE (YRS)	45.27	45.46	49.96	50.65	53.70	54.60	

FREQUENCY MISSING = 1

TABLE III-20

MEDICAL PROFESSIONS BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

MEDICAL PROFESSIONS / TYPE OF STATION	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
PHYSICIANS	6423	3177	2065	446	58	173	12342
	93.90	93.88	90.85	89.20	84.06	85.64	93.02
DENTISTS	417	207	208	54	11	29	926
	6.10	6.12	9.15	10.80	15.94	14.36	6.98
TOTAL	6840	3384	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

TABLE III-21

MEDICAL SPECIALTIES BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

MEDICAL SPECIALTIES / FREQUENCY / COLUMN PERCENT	TYPE OF STATION: COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
SPECIAL SURGERY	872	429	125	20	0	21	1467
	12.75	12.68	5.51	4.00	0.00	10.45	11.06
GENERAL SURGERY	423	252	134	56	0	4	869
	6.19	7.45	5.90	11.20	0.00	1.99	6.55
SPECIAL INTERNAL	1433	747	249	48	1	20	2498
	20.96	22.09	10.97	9.60	1.45	9.95	18.84
ANESTHE-SIOLOGY	191	97	28	5	0	0	321
	2.79	2.87	1.23	1.00	0.00	0.00	2.42
PSYCHIATRY NEUROLOGY	1193	514	554	39	7	59	2366
	17.45	15.20	24.41	7.80	10.14	29.35	17.84
PATHOLOGY	290	181	83	18	0	2	574
	4.24	5.35	3.66	3.60	0.00	1.00	4.33
RADIOLOGY	510	216	107	24	1	6	864
	7.46	6.39	4.71	4.80	1.45	2.99	6.52
GENERAL INTERNAL	736	397	577	186	10	48	1954
	10.76	11.74	25.42	37.20	14.49	23.88	14.74
SPECIAL DENTISTRY	166	60	40	2	10	13	291
	2.43	1.77	1.76	0.40	14.49	6.47	2.19
GENERAL DENTISTRY	245	146	168	52	1	14	626
	3.58	4.32	7.40	10.40	1.45	6.97	4.72
OTHER	344	102	85	14	0	6	551
	5.03	3.02	3.74	2.80	0.00	2.99	4.16
RESEARCH	170	69	4	0	0	1	244
	2.49	2.04	0.18	0.00	0.00	0.50	1.84
ADMINISTRA-TION	264	172	116	36	39	7	634
	3.86	5.09	5.11	7.20	56.52	3.48	4.78
TOTAL	6837	3382	2270	500	69	201	13259
ROW PERCENT	51.56	25.51	17.12	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 9

TABLE III-22

FULL-TIME AND PART-TIME MEDICAL STAFF BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

DUTY STATUS	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
FULL TIME	3708	1888	1852	466	63	145	8122
	54.21	55.79	81.48	93.20	91.30	71.78	61.21
PART TIME	3132	1496	421	34	6	57	5146
	45.79	44.21	18.52	6.80	8.70	28.22	38.79
TOTAL	6840	3384	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

SECTION IV: RECRUITMENT AND RETENTION OF PHYSICIANS AT THE VETERANS ADMINISTRATION

The recruitment and retention of physicians in the VA are central issues in developing recommendations for special pay. To address these issues we have employed several different data sources. The Physician Recruitment and Staffing Report (17-5) data tape provides information regarding physician gains, losses, and vacancies within the VA system. This information, in conjunction with the PAID Master Files, allows us to present several standard summary measures used to identify the presence of any particular problem areas.

A. Labor Markets for Employment Gains and Losses

In order to highlight the labor markets faced by the VA, we grouped the fiscal year 1985 gains and losses of individual physicians into two categories: "Within the VA" and "Outside the VA." The "within" category includes transfers to (from) another VA station, changes in duty status from full-time to part-time (and vice versa), and transitions from VA resident programs to VA staff positions. The "outside" category represents five groups: private practice; university related; non-VA federal sector; private hospitals and clinics; and other.

To the extent gains represent actual recruitment behavior, it is clear that universities dominate the labor market for VA physicians. Table IV-1 shows that universities account for 39.50 percent of the total gains and 51.93 percent (510 of 982) of the gains from outside the VA. Of the university-related gains, 70.59 percent (360 of 510)

are part-time. Most of the university gains are from individuals salaried at university medical schools. Faculty members represent 25.56 percent of total gains and 33.60 percent (330 of 982) of all gains from outside the VA. The other predominant sector outside the VA is private practice, which makes up almost 15 percent (14.79 percent) of the total gains. The categories "non-VA federal," "private hospitals and clinics," and "other" evidently play minor roles in the recruitment process, contributing a combined 21.77 percent (281 of 1,291) of the total gains.

Turning to the gains by complexity level, Tables IV-2 and IV-3 clearly illustrate the differences in the recruitment market between levels I and II, and levels III and IV. Levels I and II rely upon the university market for nearly half of all gains (45.45 percent), most of which are part-time (336 of 440), compared to less than one quarter (21.67 percent) for levels III and IV. Levels III and IV rely more heavily on private practice and private hospitals and clinics.

The reliance by the VA upon the university-related labor market can be made even more dramatic by including the gains from VA residencies. Doing so increases the share of total gains from the university market to 52.13 percent (39.50 percent plus 12.63 percent, see Table IV-1). The increase differs between full-time and part-time: 37.85 percent (26.41 percent plus 11.44 percent) of all full-time gains and 63.34 percent (49.79 percent plus 13.55 percent) of all part-time gains. Both VA and non-VA residents alone contribute 23.01 percent (12.63 percent plus 10.38 percent) of the total gains.

Station complexity levels I and II, due to their greater percentage of university affiliations, obtain 60.43 percent (45.45 percent plus 14.98 percent) of their gains from universities, when VA residents are included. On the other hand, levels III and IV obtain only 27.24 percent (21.67 percent plus 5.57 percent) of their gains from the university market, including VA residents.

The distribution of losses can be a useful indicator of potential retention problems. Aside from the unspecified category, Table IV-4 suggests that most VA physicians go into private practice (25.79 percent of total losses), followed by retirement (14.07 percent of total losses). This pattern changes little by level of station complexity, except that levels III and IV have a greater percentage of losses within the VA system (20.31 percent versus 9.58 percent for levels I and II, see Tables IV-5 and IV-6). In addition, the percentage of retirees in levels III and IV is greater than that in levels I and II (22.61 percent versus 10.97 percent), suggesting that the physicians in levels III and IV tended to be older. This is consistent with the findings presented in Table III-19 of Section III.

The data indicate a strong seasonal variation among the gains. Almost 48 percent of all gains occurred in the fourth quarter, 18 percent in the first quarter, 22 percent in the second quarter, and 13 percent in the third quarter. Losses, however, were evenly distributed throughout the year. The seasonal pattern of the gains is mirrored both within levels I and II, and levels III and IV. However, within levels I and II, the fourth quarter accounted for

52.3 percent of all gains, while within levels III and IV, the fourth quarter accounted for only 34.3 percent of all gains. The fourth quarter increase was largely due to the academic market.

B. Turnover Rates for Physicians

Turnover rates, or separation rates, measure the number of persons who have left an organization relative to an average number of persons employed within a given time period. This implies that turnover rates exclude transfers or other internal movement within an organization. In order to characterize variations within the VA itself (a heterogeneous organization, discussed in Section III), we calculated turnover rates which include transfers from one VA hospital to another. This allows recruitment and retention problems faced by each station to be different. We have no reason to believe that the stations compete for physicians any differently within the VA than they do from outside the VA. We excluded losses reporting a change in duty status within the VA but not a loss in personnel for any station.

We defined a turnover rate for all physicians, by duty status, and by age and experience, as follows:

$$TR = L / M$$

where: TR is the turnover rate;

L is the number of losses that occurred during the year; and

M is a measure of the average number of positions at risk during the year.

A common definition of turnover rates uses average employment during the period in the denominator. One problem with this

definition is that the average employment value may not capture the degree to which some positions are continually left unfilled (i.e., average employment need not reflect the "fully-staffed" level of employment). We used losses to capture deviations in average employment from the fully-staffed level as it was the best possible approximation, given the data available. After including a fraction of the total losses that occurred during the period, the denominator becomes:

$$M = 0.5*(B+E) + b*L$$

where: B is the beginning of year employment

E is the end of year employment; and

b is the fraction of total losses required so that the denominator reflects more closely the number of positions at risk (Note 4).

The value of "b" is restricted to be between zero and one. Whenever b equals zero, average employment approximates the fully-staffed level. A value of one indicates that none of the losses occurring during the year are captured in the average employment value.

Since the 17-5 data does not provide the detail necessary to estimate an appropriate value, we calculated turnover rates for values of "b" equal to zero, one-half and one. While the magnitude of the rates changed as the values of "b" changed, the rankings of the specialties and the complexity levels did not change dramatically. Thus, we present weighted average turnover rates for the value of "b" equal to one-half. (For the 1984 Biennial Report, "b" was set equal to one-half.) The weight used was the average

number of positions at risk in each specialty/station combination. If the average were unweighted, each station/specialty turnover rate would be treated equally. The weighting process takes into account the differences in size among the station/specialty combinations.

Tables IV-7 through IV-9 present turnover rates by age and VA experience, and overall averages, for the calendar years 1985, 1986 and 1987, respectively. The overall turnover rate has increased from 7.9 percent in 1985 to 11.0 percent in 1987. The turnover rates by age exhibit relatively higher rates for the "less than 35" and "65 and over" age groups. This pattern is expected, as it reflects job or career changes by younger physicians and retirement by older physicians. A similar pattern can be seen in the experience groups. The striking feature of these tables is the high turnover rate (relative to the individual year's average) in the "less than 2 years" and "2 to 4 years" experience groups for virtually all age groups. This is a very strong indication that the VA has difficulty in retaining physicians much beyond 4 years, no matter what their age. The average years of VA experience for all physician losses was 6 years in 1985 and 1987, and 7.4 years in 1986.

Tables IV-10 through IV-12 present turnover rates by age and VA experience for full-time physician losses. The overall turnover rates are somewhat lower than those for all physicians, indicating a higher turnover among part-time physicians. The pattern of relatively high turnover among the lower experience groups persists and shows some evidence of increasing from 1985 to 1987. The average years of VA experience for full-time losses was 7.9 years in 1985, 11

years in 1986, and 8.2 years in 1987.

Turnover rates for all and full-time physician losses by specialty and VA station complexity level are presented in Tables IV-13 and IV-14, respectively. In order to concentrate on the relative differences between the specialties and complexity levels, we calculated a weighted average turnover rate for the three-year period, 1985 to 1987. The specialized surgery, general surgery, psychiatry/neurology, and general internal medicine specialties have relatively higher turnover rates in both tables. While in most cases the full-time turnover rate is lower than the all-physician rate, the average for specialized surgery is higher for full-time losses. The average years of VA experience for all losses in 1987 ranges from 4.7 years in specialized surgery and anesthesiology to 12.1 years for administration. The full-time losses in 1987 ranged from 5.6 years of service for specialized internal medicine to 14 years in administration. As one moves from complexity level I to level IV, the turnover rates increase substantially. This is further evidence that medical centers within the VA face different problems regarding the retention of physicians.

C. Replacement Rates for Physicians

Having described the VA's labor markets, new entrants (gains), and characteristics of employee turnover at the VA, we now combine information about gains and losses into a "replacement rate." In general, a replacement rate measures the proportion of all losses that are replaced over a given period of time, defined as follows:

$$RR = G / L$$

where: RR is the replacement rate for a particular station/specialty combination;

G is the number of gains in the particular station/specialty; and

L is the number of losses in the particular station/specialty combination.

Ideally, we would like to know the characteristics of both the individual leaving the VA and his or her replacement. This would allow us to address two issues:

1. The extent to which the VA is able to fill available positions and
2. The extent to which vacancies are filled with individuals having similar characteristics.

Because the 17-5 data do not allow precise matching of a new entrant (gain) to the individual being replaced (loss), we performed an approximation.

Methodology. In order to match a gain as closely as possible with a particular loss, we identified each loss by station number, specialty, and quarter of the year. Each gain was identified by the same information, along with the time it took to recruit the individual. We assumed that each loss generated a search for a replacement having the same specialty. The time reported to recruit a "replacement" allowed us to match a gain in the current, or subsequent, period with a loss in the current period. For example, any gain in the second quarter of 1985 with recruitment time greater than three months, but less than or equal to six months, was treated as a response to a loss in the first quarter, and was coded as a first quarter gain.

For a loss in any given quarter, we allowed twelve months (including the quarter in which the loss occurred) for a replacement to be found. (The number of gains determined in this manner may exceed the number of losses). The replacement rate was set equal to zero whenever a loss occurred without a corresponding gain. In order to give each quarter the full twelve months recruitment time, the replacement rates were calculated for the fiscal years 1985, 1986 and 1987.

An average ratio of gains to losses was made for each specialty and complexity level, weighted by the number of losses in each specialty and station combination. The replacement rates so calculated represent the average proportion of all losses in the fiscal year that are filled within twelve months. Thus, they capture not only whether positions are being filled, but also the speed at which they are filled.

We also calculated replacement rates for the following attributes of the individual gains and losses: full-time; board-certified; and full-time, board certified. For example, using full-time duty status, these rates represent the proportion of all full-time losses that are filled by full-time gains, and are weighted by the number of full-time losses. Other rates should be interpreted in a similar fashion.

Results. The results, expressed as percentages, are presented in Table IV-15 through IV-18, by specialty and station complexity level. Table IV-15 presents the broad definition of replacement, while Table IV-18 is more restrictive. In order to reduce year-to-year

variations, we also present a three-year average rate. The average replacement rate indicates that 107.2 percent of all 1985-1987 losses are filled within twelve months. The tables show very clearly that the more specific the characteristics of the physician loss, the more difficult it is to recruit a comparable replacement. Full-time losses are replaced with full-time gains at a slightly lower rate (94.2 percent) than are board-certified individuals (99.4 percent). The replacement of full-time, board-certified physicians averages only 85.6 percent.

Complexity level I has the highest replacement rate for all physicians (112.2 percent), yet is one of the lowest in all the remaining tables. This indicates that while stations in this level are able to fill their positions, they have difficulty in hiring individuals with characteristics similar to the losses.

The specialties psychiatry/neurology and administration have relatively low rates throughout the tables, indicating potential recruitment problems.

While the replacement rate results are instructive, they should be interpreted with some caution. The rates allow some flexibility in the replacement of a specific medical specialty due to the general categories we have used. The rates have assumed that for each loss, active recruitment is undertaken to find a replacement, when in fact this may not be true. There may be changes in staffing requirements or other factors, which can either raise or lower the need for additional staff. In addition, the rates will include the movement into and out of the VA by the same individual.

D. Vacancy Rates

A vacancy rate represents the proportion of total positions available that are not filled at a given point in time. We defined a vacancy rate for each specialty and complexity level as follows:

$$VR = V / (E + V)$$

where: V is the number of vacancies at the end of the year;

E is the number of physicians on duty at the end of the year.

The results, expressed as a percent, are presented in Tables IV-19 and IV-20. Table IV-19 shows an overall average vacancy rate for full- and part-time vacancies of 3.8 percent. The rate for full-time vacancies, as shown in Table IV-20, is 4.6 percent. The full-time vacancy rates tend to be slightly higher than those for all vacancies by specialty and complexity level. To the extent the VA is actually attempting to fill these vacancies, the results correspond to the replacement rates in that full-time positions are relatively more difficult to fill. Specialized surgery and psychiatry/neurology have relatively high full-time vacancy rates and relatively low full-time replacement rates. The total number of vacancies in psychiatry/neurology has more than doubled from 1985 to 1987. This accounts for almost one-third of the total increase in vacancies over the same period.

E. Case Study: Chiefs of Staff

We have seen in the previous sections that administration has a high turnover rate and a low replacement rate. The ability of the VA to recruit and retain highly qualified administrators is crucial for

the well-being of the VA system. For this reason, we have chosen to examine one of the senior positions in the VA, the Chief of Staff (COS). The data available only allows us to analyze the COS over a three-year period, from January 1985 through December 1987. For this reason, we were not able to follow the entire career path of each COS. Instead, we have broken the COS into two groups: those who were a COS as of January 1985; and those who became COS after January 1985.

There are a total of 172 COS positions available in the VA. As of January 1985, 146 of these were filled. This represents a vacancy rate of 15 percent (26 out of 172), which is substantially higher than those presented above. Of these 146, only 95 (65 percent) remained in the COS position through December 1987, though not necessarily at the same station (9 changed station). The remaining 51 either left the VA entirely (40 persons) or left the COS position but remained in the VA (11 persons). Of the 40 who left the VA, 34 (85.0 percent) did so due to retirement. The average tenure as COS for the group of 51 is 7.3 years (6 years for the 11, and 9.3 years for the 40).

After January 1985, 68 physicians became COS. Of the 68, 56 remained in the COS position through December 1987. This indicates that a total of 151 (95 plus 68) COS positions were filled as of December 1987, representing a vacancy rate of 12.2 percent. There is greater movement among this second group of COS, with 27 out of 56 changing stations by December, 1987. Of the 12 who leave the COS position, 5 remain in the VA, and of the 7 who leave the VA, 2 do so

due to retirement. The average tenure as COS for the group of 12 is 1.3 years.

Combining the information from these two groups allows us to construct an average turnover rate. The total number of individuals that left the COS position in the three-year period is 63 (51 plus 12). The average number of COS on duty in that period is 148.5 (146 plus 151, divided by 2). Using the turnover rate formula defined above yields an average turnover rate of 35 percent (63 divided by 180), or an annual rate of approximately 12 percent. This is a higher turnover rate than the average full-time rate for administration as a whole (see Table IV-14). Unfortunately, the three-year period of study, combined with the movement of COS among stations, does not allow us to identify precisely which stations are left chronically unfilled and which are filled for only a short time.

F. Contract Costs

The VA regularly contracts with outside physicians to perform any number of services required by the particular medical center. Thus, while the reasons for hiring private contractors will be as varied as the VA medical centers, two basic justifications can be made for entering into a contract agreement: 1) the particular medical center may not require the services of a regular full- or part-time employee, making it more efficient to hire a contractor; 2) the medical center may have difficulty in hiring a regular employee, in which case they must resort to hiring a contractor.

In order to examine the amount of contracting the VA is engaged

in, we were provided with a list of contract costs by specialty and station for the fiscal years 1986, 1987 and 1988. This information does not allow us to identify the reasons a contract was made. We were able, however, to identify whether the contract was written on a full-time equivalent (FTE) basis or not (they can also be specified as per procedure, per clinic, per hour, or a flat fee).

The total contract costs by detailed specialty are presented in Table IV-21. The contract cost is reported in the fiscal year in which it is received, and therefore does not necessarily indicate the actual cost incurred in that year. This should be kept in mind when making year-to-year comparisons. The largest contributors are anesthesiology and radiology, which make up 79.4 percent of the total contract costs in fiscal year 1988.

Table IV-22 presents the total contract costs for those contracts which report an FTE. Contracts written on an FTE basis are the closest we can come to comparing what the VA pays a full-time employee relative to what they must pay to hire a contractor. We should emphasize that while a contract may be written on an FTE basis, this need not indicate an inability on the part of the medical center to hire a full-time employee. Table IV-23 presents the average cost per FTE for those contracts reporting an FTE. In Table IV-24, we have compared the average contract cost per FTE by specialty with AMA average salaries and VA full-time employee average salaries. The comparison indicates that the VA pays contractors less than the AMA average and above the VA average. We should point out that the contract costs will include the direct expenses of the

physician.

G. Historical Trends in Retirement Rates

The 17-5 data contain information on the number of retirees from fiscal years 1979 to 1987 on a quarterly basis. Using only retirees 55 years or older, we compared retirees to the total number of losses within each quarter. There is no evidence of an overall annual trend in the number of retirements. There is, however, the presence of a strong seasonal pattern, peaking in the second quarter. For this reason, we grouped the data by quarters.

The results are presented in Tables IV-25 to IV-26, and shown graphically in Figure 1. The average of the number of retirees as a percent of total losses is 14.5 percent for the first quarter, 22.9 percent for the second quarter, 10.9 percent for the third quarter, and 9.6 percent for the fourth quarter. The second quarter average is clearly higher than the others. The second quarter of 1986 is particularly noteworthy: it represents 41.2 percent of all second quarter 1986 losses and 179.0 percent of the overall second quarter average for 1979 through 1987.

Why should retirements jump so dramatically in the second quarter of fiscal year 1986? On October 1, 1985, the VA made a major change in its annuity policy (see DMS Supplement, MP-5, Part II, Chapter 3, Sub-Section 3B.17). Before that date, special pay was excluded from annuity computations based on the highest three salary years. After that date, retirees received credit for one-half of special pay in computing annuity levels. Presumably physicians and dentists had a

strong incentive to "wait in the pipeline" until they could receive a larger annuity. If so, why did retirements peak in the second quarter of 1986 rather than the first quarter of 1986?

We cannot be sure, but we can offer several potential explanations for a three-to-five month delay. Notice that retirements generally increase in the second quarter. Many staff members, eligible to retire in the fall of 1985, may have decided to wait until the beginning of calendar year 1986 due to contractual obligations. While the academic year normally ends in the spring quarter, staff members with faculty appointments may have incurred commitments to remain on duty only through the first semester. In addition, in order to receive special pay, most VA physicians and dentists sign a four-year agreement obligating them to work at least one full year for the VA (otherwise, the special pay must be returned). The VA changed retirement plans in 1981, and VA staff members had until April 1, 1981 to remain under the old plan or to elect the new plan. If many physicians and dentists signed four-year agreements in 1981, they had to make renewal decisions by the second quarter of 1985. If many older physicians and dentists did, in fact, sign special pay agreements in the second quarter of 1985, they had to wait an additional year, until the second quarter of 1986, before they could retire with one-half credit for special pay. On the other hand, if the increase in second quarter 1986 retirements were totally explainable by those holding off retirement to take advantage of the special pay provisions, one would expect to see the number of retirees as a percent of total losses decline as 1985

approached. There is a decline within each of the second quarters from 1979 to 1982, while there is an increase in the second quarter of 1983 and 1984. At present we have no explanation for these increases. Finally, retirees may be waiting until the beginning of the next calendar year to cash in annual leave payments for tax purposes.

In any case, the results suggest a strong response to the partial inclusion of special pay in retirement annuity. This may have important implications regarding the magnitude of retirement in 1990 when 100 percent of special pay will be included toward retirement pay.

H. Data Limitations of the Physician Staffing Survey

We deleted duplicate records from the analysis. Sometimes the 17-5 data appeared to contain both an original record and its correction. Since these cases often differed by only one field, we could not determine which record was "correct" and as a result, both records remained in the analysis.

There appears to be some disagreement among the "gain from" and the "loss to" codes. According to VA Circular 10-86-39, "If a physician changes from part-time to full-time, this will be reported as a gain with full-time duty status (it will also be reported as a part-time loss)" (p. C-1). This implies that each full-time gain reporting a change in duty status should have a matching record as a part-time loss reporting a change in duty status. The converse of this (not explicitly stated in the documentation) is that each part-

time gain reporting a change in duty status should have a matching record as a full-time loss reporting a change in duty status. These cross-classifications do not match up exactly, indicating that some individuals are being reported in one category and not in the other. A similar problem exists with gain code equal to "10" (transfer from another VA health care facility) and loss code equal to "11" (transfer to another VA health care facility). Each transfer should have two records, one from the losing facility and one from the gaining facility. Again, we did not find this to be the case. The 17-5 has a limited amount of information that can be used to guarantee a correct match. We chose not to "force" these classifications to match up by creating additional records.

I. Conclusion

We presented several measures characterizing recruitment and retention patterns within the VA. Our results show distinct differences among the station complexity levels and the specialties.

Complexity levels I and II have strong recruitment ties to academic institutions. This can be seen from the percentage of gains from the academic market, and the strong seasonality of gains. Complexity levels III and IV have weaker ties to the academic market and consequently a less severe seasonal gain pattern.

The turnover among physicians with less than 4 years of experience appears to be a problem in the VA, particularly since it crosses over almost all age groups. The replacement rates indicate that psychiatry/neurology and the administrative specialties have

serious difficulty in recruitment. The Chief of Staff positions have higher than average turnover and vacancy rates compared to the general administrative category.

The important feature in the pattern of retirements, aside from the underlying seasonality, is the unmistakable increase in the number of retirees as a percent of total losses in 1986. This appears to be in response to the partial inclusion of special pay in retirement annuity.

TABLE IV-1

GAIN/LOSS CATEGORIES: GAINS
ALL PATIENT CARE SPECIALITIES, 1985

	TOTAL		FULL-TIME		PART-TIME	
	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL
I. WITHIN THE VA SYSTEM:						
1) TRANSFER FROM ANOTHER VA HOSPITAL	126	9.76	92	16.20	34	4.70
2) CHANGE IN DUTY STATUS	20	1.55	11	1.94	9	1.24
3) RESIDENCY (VA)	163	12.63	65	11.44	98	13.55
SUBTOTAL	309	23.93	168	29.58	141	19.50
II. OUTSIDE THE VA SYSTEM:						
1) PRIVATE PRACTICE:	191	14.79	107	18.84	84	11.62
2) UNIVERSITY RELATED:						
UNIV MED SCH (UNIV SALARIED)	330	25.56	80	14.08	250	34.58
UNIV MED SCH (NON-UNIV SALARIED)	45	3.49	14	2.46	31	4.29
RESIDENCY (NON VA)	134	10.38	56	9.86	78	10.79
MED SCHOOL GRAD	1	0.08	0	0.00	1	0.14
SUBTOTAL	510	39.50	150	26.41	360	49.79
3) NON-VA FEDERAL SECTOR:						
MILITARY	25	1.94	18	3.17	7	0.97
OTHER GOVT HOSP/CLINIC	38	2.94	22	3.87	16	2.21
SUBTOTAL	63	4.88	40	7.04	23	3.18
4) PRIVATE HOSP/CLINIC:						
PRVT OR COMMUNITY HOSP/CLINIC	150	11.62	73	12.85	77	10.65
COMMUNITY HEALTH CENTER	5	0.39	3	0.53	2	0.28
SUBTOTAL	155	12.01	76	13.38	79	10.93
5) OTHER:						
RETIREMENT	6	0.46	3	0.53	3	0.41
INVOLUNTARY TERM	0	0.00	0	0.00	0	0.00
UNSPECIFIED	57	4.42	24	4.23	33	4.56
SUBTOTAL	63	4.88	27	4.75	36	4.98
GRAND TOTAL	1291	100.00	568	100.00	723	100.00

NOTE:

NUMBERS EXCLUDE 1) STATION NUMBERS LESS THAN 400, GREATER THAN 700, AND EQUAL TO 692;
2) RESEARCH AND ADMINISTRATION SPECIALTIES.
ALL GAIN CODES ARE INCLUDED.

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-2

GAIN/LOSS CATAGORIES: GAINS
COMPLEXITY LEVELS I AND II
ALL PATIENT CARE SPECIALITIES 1985

	TOTAL		FULL-TIME		PART-TIME	
	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL
I. WITHIN THE VA SYSTEM:						
1) TRANSFER FROM ANOTHER VA HOSPITAL	77	7.95	51	15.36	26	4.09
2) CHANGE IN DUTY STATUS	14	1.45	7	2.11	7	1.10
3) RESIDENCY (VA)	145	14.98	52	15.66	93	14.62
SUBTOTAL	236	24.38	110	33.13	126	19.81
II.OUTSIDE THE VA SYSTEM:						
1) PRIVATE PRACTICE:	102	10.54	44	13.25	58	9.12
2) UNIVERSITY RELATED:						
UNIV MED SCH (UNIV SALARIED)	293	30.27	58	17.47	235	36.95
UNIV MED SCH (NON-UNIV SALARIED)	36	3.72	8	2.41	28	4.40
RESIDENCY (NON VA)	110	11.36	38	11.45	72	11.32
MED SCHOOL GRAD	1	0.10	0	0.00	1	0.16
SUBTOTAL	440	45.45	104	31.33	336	52.83
3) NON-VA FEDERAL SECTOR:						
MILITARY	16	1.65	11	3.31	5	0.79
OTHER GOVT HOSP/CLINIC	24	2.48	9	2.71	15	2.36
SUBTOTAL	40	4.13	20	6.02	20	3.14
4) PRIVATE HOSP/CLINIC:						
PRVT OR COMMUNITY HOSP/CLINIC	98	10.12	32	9.64	66	10.38
COMMUNITY HEALTH CENTER	3	0.31	3	0.90	0	0.00
SUBTOTAL	101	10.43	35	10.54	66	10.38
5) OTHER:						
RETIREMENT	4	0.41	2	0.60	2	0.31
INVOLUNTARY TERM	0	0.00	0	0.00	0	0.00
UNSPECIFIED	45	4.65	17	5.12	28	4.40
SUBTOTAL	49	5.06	19	5.72	30	4.72
GRAND TOTAL	968	100.00	332	100.00	636	100.00

NOTE:

NUMBERS EXCLUDE 1) STATION NUMBERS LESS THAN 400, GREATER THAN 700, AND EQUAL TO 692;
2) RESEARCH AND ADMINISTRATION SPECIALTIES.
ALL GAIN CODES ARE INCLUDED.

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-3

GAIN/LOSS CATEGORIES: GAINS
COMPLEXITY LEVELS III AND IV
ALL PATIENT CARE SPECIALITIES, 1985

	TOTAL		FULL-TIME		PART-TIME	
	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL
I. WITHIN THE VA SYSTEM:						
1) TRANSFER FROM ANOTHER VA HOSPITAL	49	15.17	41	17.37	8	9.20
2) CHANGE IN DUTY STATUS	6	1.86	4	1.69	2	2.30
3) RESIDENCY (VA)	18	5.57	13	5.51	5	5.75
SUBTOTAL	73	22.60	58	24.58	15	17.24
II.OUTSIDE THE VA SYSTEM:						
1) PRIVATE PRACTICE:	89	27.55	63	26.69	26	29.89
2) UNIVERSITY RELATED:						
UNIV MED SCH (UNIV SALARIED)	37	11.46	22	9.32	15	17.24
UNIV MED SCH (NON-UNIV SALARIED)	9	2.79	6	2.54	3	3.45
RESIDENCY (NON VA)	24	7.43	18	7.63	6	6.90
MED SCHOOL GRAD	0	0.00	0	0.00	0	0.00
SUBTOTAL	70	21.67	46	19.49	24	27.59
3) NON-VA FEDERAL SECTOR:						
MILITARY	9	2.79	7	2.97	2	2.30
OTHER GOVT HOSP/CLINIC	14	4.33	13	5.51	1	1.15
SUBTOTAL	23	7.12	20	8.47	3	3.45
4) PRIVATE HOSP/CLINIC:						
PRVT OR COMMUNITY HOSP/CLINIC	52	16.10	41	17.37	11	12.64
COMMUNITY HEALTH CENTER	2	0.62	0	0.00	2	2.30
SUBTOTAL	54	16.72	41	17.37	13	14.94
5) OTHER:						
RETIREMENT	2	0.62	1	0.42	1	1.15
INVOLUNTARY TERM	0	0.00	0	0.00	0	0.00
UNSPECIFIED	12	3.72	7	2.97	5	5.75
SUBTOTAL	14	4.33	8	3.39	6	6.90
GRAND TOTAL	323	100.00	236	100.00	87	100.00

NOTE:

NUMBERS EXCLUDE 1) STATION NUMBERS LESS THAN 400, GREATER THAN 700, AND EQUAL TO 692;
2) RESEARCH AND ADMINISTRATION SPECIALTIES.
ALL GAIN CODES ARE INCLUDED.

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-4

GAIN/LOSS CATEGORIES: LOSSES
ALL PATIENT CARE SPECIALITIES, 1985

	TOTAL		FULL-TIME		PART-TIME	
	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL
I. WITHIN THE VA SYSTEM:						
1) TRANSFER TO ANOTHER VA HOSPITAL	111	11.31	80	17.09	31	6.04
2) CHANGE IN DUTY STATUS	11	1.12	5	1.07	6	1.17
3) RESIDENCY (VA)	0	0.00	0	0.00	0	0.00
SUBTOTAL	122	12.44	85	18.16	37	7.21
II. OUTSIDE THE VA SYSTEM:						
1) PRIVATE PRACTICE:	253	25.79	92	19.66	161	31.38
2) UNIVERSITY RELATED:						
UNIV MED SCH (UNIV SALARIED)	74	7.54	23	4.91	51	9.94
UNIV MED SCH (NON-UNIV SALARIED)	29	2.96	8	1.71	21	4.09
RESIDENCY (NON VA)	0	0.00	0	0.00	0	0.00
MED SCHOOL GRAD	0	0.00	0	0.00	0	0.00
SUBTOTAL	103	10.50	31	6.62	72	14.04
3) NON-VA FEDERAL SECTOR:						
MILITARY	6	0.61	4	0.85	2	0.39
OTHER GOVT HOSP/CLINIC	22	2.24	17	3.63	5	0.97
SUBTOTAL	28	2.85	21	4.49	7	1.36
4) PRIVATE HOSP/CLINIC:						
PRVT OR COMMUNITY HOSP/CLINIC	74	7.54	36	7.69	38	7.41
COMMUNITY HEALTH CENTER	3	0.31	1	0.21	2	0.39
SUBTOTAL	77	7.85	37	7.91	40	7.80
5) OTHER:						
RETIREMENT	138	14.07	101	21.58	37	7.21
INVOLUNTARY TERM	64	6.52	26	5.56	38	7.41
UNSPECIFIED	196	19.98	75	16.03	121	23.59
SUBTOTAL	398	40.57	202	43.16	196	38.21
GRAND TOTAL	981	100.00	468	100.00	513	100.00

NOTE:

NUMBERS EXCLUDE 1) STATION NUMBERS LESS THAN 400, GREATER THAN 700, AND EQUAL TO 692;
2) RESEARCH AND ADMINISTRATION SPECIALTIES.
ALL LOSS CODES ARE INCLUDED.

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-5

GAIN/LOSS CATAGORIES: LOSSES
COMPLEXITY LEVELS I AND II
ALL PATIENT CARE SPECIALITIES, 1985

	TOTAL		FULL-TIME		PART-TIME	
	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL
I. WITHIN THE VA SYSTEM:						
1) TRANSFER TO ANOTHER VA HOSPITAL	60	8.33	34	12.55	26	5.79
2) CHANGE IN DUTY STATUS	9	1.25	3	1.11	6	1.34
3) RESIDENCY (VA)	0	0.00	0	0.00	0	0.00
SUBTOTAL	69	9.58	37	13.65	32	7.13
II. OUTSIDE THE VA SYSTEM:						
1) PRIVATE PRACTICE:	200	27.78	63	23.25	137	30.51
2) UNIVERSITY RELATED:						
UNIV MED SCH (UNIV SALARIED)	60	8.33	10	3.69	50	11.14
UNIV MED SCH (NON-UNIV SALARIED)	27	3.75	6	2.21	21	4.68
RESIDENCY (NON VA)	0	0.00	0	0.00	0	0.00
MED SCHOOL GRAD	0	0.00	0	0.00	0	0.00
SUBTOTAL	87	12.08	16	5.90	71	15.81
3) NON-VA FEDERAL SECTOR:						
MILITARY	3	0.42	2	0.74	1	0.22
OTHER GOVT HOSP/CLINIC	11	1.53	8	2.95	3	0.67
SUBTOTAL	14	1.94	10	3.69	4	0.89
4)PRIVATE HOSP/CLINIC:						
PRVT OR COMMUNITY HOSP/CLINIC	57	7.92	25	9.23	32	7.13
COMMUNITY HEALTH CENTER	2	0.28	0	0.00	2	0.45
SUBTOTAL	59	8.19	25	9.23	34	7.57
5) OTHER:						
RETIREMENT	79	10.97	53	19.56	26	5.79
INVOLUNTARY TERM	50	6.94	19	7.01	31	6.90
UNSPECIFIED	162	22.50	48	17.71	114	25.39
SUBTOTAL	291	40.42	120	44.28	171	38.08
GRAND TOTAL	720	100.00	271	100.00	449	100.00

NOTE:

NUMBERS EXCLUDE 1) STATION NUMBERS LESS THAN 400, GREATER THAN 700, AND EQUAL TO 692;
2) RESEARCH AND ADMINISTRATION SPECIALTIES.
ALL LOSS CODES ARE INCLUDED.

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-6

GAIN/LOSS CATAGORIES: LOSSES
COMPLEXITY LEVELS III AND IV
ALL PATIENT CARE SPECIALITIES, 1985

	TOTAL		FULL-TIME		PART-TIME	
	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL	NUMBER	% OF G.TOTAL
I. WITHIN THE VA SYSTEM:						
1) TRANSFER TO ANOTHER VA HOSPITAL	51	19.54	46	23.35	5	7.81
2) CHANGE IN DUTY STATUS	2	0.77	2	1.02	0	0.00
3) RESIDENCY (VA)	0	0.00	0	0.00	0	0.00
SUBTOTAL	53	20.31	48	24.37	5	7.81
II.OUTSIDE THE VA SYSTEM:						
1) PRIVATE PRACTICE:	53	20.31	29	14.72	24	37.50
2) UNIVERSITY RELATED:						
UNIV MED SCH (UNIV SALARIED)	14	5.36	13	6.60	1	1.56
UNIV MED SCH (NON-UNIV SALARIED)	2	0.77	2	1.02	0	0.00
RESIDENCY (NON VA)	0	0.00	0	0.00	0	0.00
MED SCHOOL GRAD	0	0.00	0	0.00	0	0.00
SUBTOTAL	16	6.13	15	7.61	1	1.56
3) NON-VA FEDERAL SECTOR:						
MILITARY	3	1.15	2	1.02	1	1.56
OTHER GOVT HOSP/CLINIC	11	4.21	9	4.57	2	3.13
SUBTOTAL	14	5.36	11	5.58	3	4.69
4) PRIVATE HOSP/CLINIC:						
PRVT OR COMMUNITY HOSP/CLINIC	17	6.51	11	5.58	6	9.38
COMMUNITY HEALTH CENTER	1	0.38	1	0.51	0	0.00
SUBTOTAL	18	6.90	12	6.09	6	9.38
5) OTHER:						
RETIREMENT	59	22.61	48	24.37	11	17.19
INVOLUNTARY TERM	14	5.36	7	3.55	7	10.94
UNSPECIFIED	34	13.03	27	13.71	7	10.94
SUBTOTAL	107	41.00	82	41.62	25	39.06
GRAND TOTAL	261	100.00	197	100.00	64	100.00

NOTE:

NUMBERS EXCLUDE 1) STATION NUMBERS LESS THAN 400, GREATER THAN 700, AND EQUAL TO 692;
2) RESEARCH AND ADMINISTRATION SPECIALTIES.
ALL LOSS CODES ARE INCLUDED.

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-7

TURNOVER RATES: ALL PHYSICIANS
BY AGE AND EXPERIENCE
1985

AGE	EXPERIENCE: LESS THAN 2 YRS	2 - 4 YRS	5 - 9 YRS	10 - 18 YRS	19 + YRS	TOTAL
LESS THAN 35						
TR (%)	14.0	15.9	18.5	100.0	.	14.6
LOSSES	166	73	10	2	0	251
AGE 35-44						
TR (%)	10.3	8.1	5.3	4.1	.	7.4
LOSSES	117	114	84	14	0	329
AGE 45-54						
TR (%)	12.9	6.7	4.2	3.0	2.7	5.0
LOSSES	41	27	33	34	3	138
AGE 55-64						
TR (%)	12.6	9.3	6.4	3.6	6.6	6.5
LOSSES	24	27	35	26	38	150
AGE 65 +						
TR (%)	8.2	4.6	8.8	12.8	10.8	10.1
LOSSES	5	5	22	42	33	107
TOTAL						
TR (%)	12.2	9.2	5.7	4.7	7.4	7.9
LOSSES	353	246	184	118	74	975

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1985.

TABLE IV-8

TURNOVER RATES: ALL PHYSICIANS
BY AGE AND EXPERIENCE
1986

AGE	EXPERIENCE: LESS THAN 2 YRS	2 - 4 YRS	5 - 9 YRS	10 - 18 YRS	19 + YRS	TOTAL
LESS THAN 35						
TR (%)	18.9	22.4	34.4	.	.	20.1
LOSSES	238	97	16	1	0	352
AGE 35-44						
TR (%)	15.5	11.7	8.9	8.1	.	11.4
LOSSES	197	169	147	32	0	545
AGE 45-54						
TR (%)	13.9	9.5	7.8	4.2	4.5	7.0
LOSSES	48	36	60	54	5	203
AGE 55-64						
TR (%)	13.2	9.0	9.3	7.2	13.3	9.9
LOSSES	28	25	48	56	75	232
AGE 65 +						
TR (%)	17.5	10.4	15.7	20.4	27.0	20.1
LOSSES	12	11	40	74	86	223
TOTAL						
TR (%)	16.6	12.8	9.6	7.7	16.6	12.1
LOSSES	523	338	311	217	166	1555

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1986.

TABLE IV-9

TURNOVER RATES: ALL PHYSICIANS
BY AGE AND EXPERIENCE
1987

AGE	EXPERIENCE: LESS THAN 2 YRS	2 - 4 YRS	5 - 9 YRS	10 - 18 YRS	19 + YRS	TOTAL
LESS THAN 35						
TR (%)	16.9	21.6	25.0	.	.	18.2
LOSSES	202	95	12	2	1	312
AGE 35-44						
TR (%)	13.5	11.8	9.7	7.6	.	11.1
LOSSES	168	180	154	35	0	537
AGE 45-54						
TR (%)	15.6	11.2	7.9	4.6	4.7	7.6
LOSSES	58	45	59	65	5	232
AGE 55-64						
TR (%)	12.2	15.5	7.6	5.4	7.4	8.2
LOSSES	26	45	36	43	41	191
AGE 65 +						
TR (%)	10.6	10.6	14.7	16.1	14.2	14.2
LOSSES	10	11	32	54	43	150
TOTAL						
TR (%)	14.9	13.6	9.6	6.6	9.3	11.0
LOSSES	464	376	293	199	90	1422

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1987.

TABLE IV-10

TURNOVER RATES: FULL-TIME PHYSICIANS
BY AGE AND EXPERIENCE
1985

AGE	EXPERIENCE: LESS THAN 2 YRS	2 - 4 YRS	5 - 9 YRS	10 - 18 YRS	19 + YRS	TOTAL
LESS THAN 35						
TR (%)	12.8	16.8	10.7	100.0	.	14.0
LOSSES	64	38	3	2	0	107
AGE 35-44						
TR (%)	7.9	5.7	3.5	2.0	.	5.0
LOSSES	39	38	30	4	0	111
AGE 45-54						
TR (%)	14.5	5.6	3.9	1.6	2.5	4.2
LOSSES	24	14	19	11	2	70
AGE 55-64						
TR (%)	10.9	8.8	6.7	3.7	5.8	6.1
LOSSES	13	18	27	20	28	106
AGE 65 +						
TR (%)	5.0	7.3	9.3	12.9	10.9	10.8
LOSSES	1	4	16	35	30	86
TOTAL						
TR (%)	10.8	8.0	4.9	4.2	7.2	6.7
LOSSES	141	112	95	72	60	480

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1985.

TABLE IV-11

TURNOVER RATES: FULL-TIME PHYSICIANS
BY AGE AND EXPERIENCE
1986

AGE	EXPERIENCE: LESS THAN 2 YRS	2 - 4 YRS	5 - 9 YRS	10 - 18 YRS	19 + YRS	TOTAL
LESS THAN 35						
TR (%)	16.2	18.0	24.0	.	.	16.7
LOSSES	87	35	6	0	0	128
AGE 35-44						
TR (%)	11.1	9.7	6.6	4.7	.	8.3
LOSSES	61	66	58	11	0	196
AGE 45-54						
TR (%)	10.5	7.7	6.5	3.6	5.1	5.7
LOSSES	17	18	31	28	4	98
AGE 55-64						
TR (%)	9.2	8.5	9.5	7.3	14.1	9.9
LOSSES	12	16	36	43	65	172
AGE 65 +						
TR (%)	19.0	8.5	17.6	20.6	28.4	22.0
LOSSES	4	4	29	60	82	179
TOTAL						
TR (%)	12.9	10.4	8.3	7.5	18.3	10.5
LOSSES	181	139	160	142	151	773

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1986.

TABLE IV-12

TURNOVER RATES: FULL-TIME PHYSICIANS
BY AGE AND EXPERIENCE
1987

AGE	EXPERIENCE: LESS THAN 2 YRS	2 - 4 YRS	5 - 9 YRS	10 - 18 YRS	19 + YRS	TOTAL
LESS THAN 35						
TR (%)	13.8	20.5	13.3	.	.	15.7
LOSSES	66	41	4	1	1	113
AGE 35-44						
TR (%)	13.2	10.0	8.1	5.2	.	9.5
LOSSES	71	69	67	15	0	222
AGE 45-54						
TR (%)	14.5	9.4	8.1	3.4	2.9	6.5
LOSSES	27	21	38	29	2	117
AGE 55-64						
TR (%)	10.5	17.0	8.9	5.9	8.1	8.7
LOSSES	14	34	31	34	36	149
AGE 65 +						
TR (%)	14.5	6.7	14.6	15.7	14.9	14.6
LOSSES	5	3	19	41	40	108
TOTAL						
TR (%)	13.4	12.4	8.8	6.1	10.1	9.7
LOSSES	183	168	159	120	79	709

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1987.

TABLE IV-13

TURNOVER RATES: ALL VA PHYSICIAN LOSSES
BY SPECIALTY
1985, 1986, 1987

SPECIALTY	1985 TR (%)	1985 LOSSES	1986 TR (%)	1986 LOSSES	1987 TR (%)	1987 LOSSES	AVERAGE TR (%)	TOTAL LOSSES
SPECIALIZED SURGERY	9.8	145	11.7	183	10.5	167	10.7	495
GENERAL SURGERY	9.2	81	13.8	128	11.9	110	11.7	319
SPEC INTERNAL MED	5.0	125	9.8	252	8.9	228	7.9	605
ANESTHESIOLOGY	7.4	24	11.8	41	14.1	51	11.2	116
PSYCHIATRY/NEUROLOGY	9.0	216	14.2	347	12.1	290	11.8	853
PATHOLOGY	5.9	35	5.5	32	6.8	40	6.1	107
RADIOLOGY	6.7	58	11.0	100	10.6	97	9.5	255
GENERAL INTERNAL MED	11.2	217	15.9	333	14.5	316	13.9	866
OTHER	6.6	36	10.7	62	10.4	61	9.3	159
RESEARCH	1.3	3	4.9	12	4.8	12	3.7	27
ADMINISTRATION	5.7	35	10.6	65	8.2	50	8.2	150
COMPLEXITY LEVEL								
I	6.9	450	10.8	737	9.0	616	8.9	1803
II	8.5	276	12.5	422	12.3	421	11.1	1119
III	8.2	174	14.1	312	13.9	307	12.1	793
IV	15.7	75	17.3	84	16.0	78	16.3	237
OVERALL AVERAGE	7.9	975	12.1	1555	11.0	1422	10.3	3952

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1985, 1986, 1987.

TABLE IV-14

TURNOVER RATES: FULL-TIME VA PHYSICIAN LOSSES
BY SPECIALTY
1985, 1986, 1987

SPECIALTY	1985 TR (%)	1985 LOSSES	1986 TR (%)	1986 LOSSES	1987 TR (%)	1987 LOSSES	AVERAGE TR (%)	TOTAL LOSSES
SPECIALIZED SURGERY	12.0	30	14.0	35	10.6	26	12.2	91
GENERAL SURGERY	6.8	25	13.9	52	10.1	35	10.3	112
SPEC INTERNAL MED	4.0	54	7.2	99	5.7	77	5.6	230
ANESTHESIOLOGY	6.7	14	9.0	19	10.7	23	8.8	56
PSYCHIATRY/NEUROLOGY	8.1	121	12.9	194	12.0	174	11.0	489
PATHOLOGY	3.5	16	4.8	22	5.1	23	4.5	61
RADIOLOGY	6.9	40	8.6	51	10.3	60	8.6	151
GENERAL INTERNAL MED	9.1	127	13.9	210	13.3	206	12.2	543
OTHER	5.4	18	7.6	26	9.7	33	7.6	77
RESEARCH	0.9	2	4.2	10	4.3	10	3.2	22
ADMINISTRATION	6.2	33	10.3	55	8.0	42	8.2	130
COMPLEXITY LEVEL								
I	5.0	167	8.4	289	7.0	239	6.8	695
II	6.8	117	9.9	172	9.7	167	8.8	456
III	7.9	135	13.4	235	13.1	230	11.5	600
IV	14.1	61	17.3	77	16.5	73	16.0	211
OVERALL AVERAGE	6.7	480	10.5	773	9.7	709	9.0	1962

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1985, 1986, 1987.

TABLE IV-15

REPLACEMENT RATES: ALL VA PHYSICIAN LOSSES
FISCAL YEARS 1985, 1986, 1987

SPECIALTY	1985 RR (%)	1985 LOSSES	1986 RR (%)	1986 LOSSES	1987 RR (%)	1987 LOSSES	AVERAGE RR (%)	TOTAL LOSSES
SPECIALIZED SURGERY	118.1	155	128.4	176	115.5	168	120.8	499
GENERAL SURGERY	111.2	89	90.5	126	96.4	112	98.2	327
SPEC INTERNAL MED	152.5	132	103.0	233	109.6	228	116.5	593
ANESTHESIOLOGY	126.1	23	131.4	35	96.2	53	113.5	111
PSYCHIATRY/NEUROLOGY	87.1	224	85.7	335	90.9	286	87.8	845
PATHOLOGY	100.0	34	159.3	27	112.2	41	120.6	102
RADIOLOGY	127.1	59	103.1	96	106.5	93	110.1	248
GENERAL INTERNAL MED	133.8	216	102.5	318	108.3	312	112.6	846
OTHER	163.2	38	115.8	57	107.1	56	124.5	151
RESEARCH	450.0	2	91.7	12	107.7	13	125.9	27
ADMINISTRATION	115.2	33	64.7	68	87.8	49	83.3	150
COMPLEXITY LEVEL								
I	130.4	470	104.2	698	107.5	624	112.2	1792
II	113.3	263	97.5	402	101.4	433	102.8	1098
III	111.1	198	107.4	296	91.4	291	102.4	785
IV	112.2	74	74.7	87	138.1	63	104.9	224
OVERALL AVERAGE	120.8	1005	101.3	1483	103.7	1411	107.2	3899

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-16

REPLACEMENT RATES: FULL-TIME VA PHYSICIAN LOSSES
FISCAL YEARS 1985, 1986, 1987

SPECIALTY	1985 RR (%)	1985 LOSSES	1986 RR (%)	1986 LOSSES	1987 RR (%)	1987 LOSSES	AVERAGE RR (%)	TOTAL LOSSES
SPECIALIZED SURGERY	86.7	30	117.9	39	60.0	25	92.6	94
GENERAL SURGERY	109.7	31	74.5	51	91.2	34	88.8	116
SPEC INTERNAL MED	122.4	58	92.6	95	107.9	76	105.2	229
ANESTHESIOLOGY	80.0	15	105.9	17	87.0	23	90.9	55
PSYCHIATRY/NEUROLOGY	85.8	120	75.8	182	89.1	175	83.2	477
PATHOLOGY	94.1	17	152.9	17	100.0	25	113.6	59
RADIOLOGY	95.1	41	103.8	53	75.9	54	91.2	148
GENERAL INTERNAL MED	131.1	132	94.3	194	101.0	202	106.1	528
OTHER	136.8	19	95.7	23	62.1	29	93.0	71
RESEARCH	400.0	2	80.0	10	90.9	11	113.0	23
ADMINISTRATION	103.2	31	55.9	59	55.0	40	66.9	130
COMPLEXITY LEVEL								
I	119.1	183	88.6	263	90.7	247	97.4	693
II	97.1	105	82.2	174	79.4	170	84.6	449
III	98.6	146	99.6	224	88.5	218	95.2	588
IV	122.6	62	70.9	79	122.0	59	102.0	200
OVERALL AVERAGE	108.9	496	88.5	740	89.9	694	94.2	1930

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-17

REPLACEMENT RATES: BOARD CERTIFIED VA PHYSICIAN LOSSES
FISCAL YEARS 1985, 1986, 1987

SPECIALTY	1985 RR (%)	1985 LOSSES	1986 RR (%)	1986 LOSSES	1987 RR (%)	1987 LOSSES	AVERAGE RR (%)	TOTAL LOSSES
SPECIALIZED SURGERY	113.6	103	106.1	132	95.1	122	104.5	357
GENERAL SURGERY	106.0	67	69.9	93	90.1	81	86.7	241
SPEC INTERNAL MED	151.8	110	105.9	185	110.6	180	118.3	475
ANESTHESIOLOGY	100.0	9	153.3	15	85.7	28	107.7	52
PSYCHIATRY/NEUROLOGY	73.3	135	79.8	188	71.8	181	75.2	504
PATHOLOGY	79.3	29	175.0	20	94.7	38	108.0	87
RADIOLOGY	113.7	51	91.6	83	109.0	78	103.3	212
GENERAL INTERNAL MED	130.2	126	99.5	191	101.5	198	107.8	515
OTHER	160.0	25	97.7	44	71.1	38	102.8	107
RESEARCH	600.0	1	77.8	9	81.8	11	104.8	21
ADMINISTRATION	126.3	19	62.2	45	65.8	38	75.5	102
COMPLEXITY LEVEL								
I	121.0	334	90.2	502	90.7	441	98.4	1277
II	103.2	189	98.2	280	90.3	330	96.1	799
III	122.0	109	111.1	171	91.7	181	106.1	461
IV	107.0	43	67.3	52	148.8	41	104.4	136
OVERALL AVERAGE	115.3	675	94.8	1005	93.2	993	99.4	2673

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-18

REPLACEMENT RATES: FULL-TIME, BOARD CERTIFIED VA PHYSICIAN LOSSES
FISCAL YEARS 1985, 1986, 1987

SPECIALTY	1985 RR (%)	1985 LOSSES	1986 RR (%)	1986 LOSSES	1987 RR (%)	1987 LOSSES	AVERAGE RR (%)	TOTAL LOSSES
SPECIALIZED SURGERY	75.0	16	100.0	27	58.8	17	81.7	60
GENERAL SURGERY	100.0	26	68.4	38	88.5	26	83.3	90
SPEC INTERNAL MED	127.3	44	93.7	63	96.9	59	103.0	166
ANESTHESIOLOGY	37.5	8	142.9	7	62.5	16	74.2	31
PSYCHIATRY/NEUROLOGY	79.4	68	72.3	94	71.6	102	73.9	264
PATHOLOGY	75.0	16	161.5	13	82.6	23	100.0	52
RADIOLOGY	83.3	36	85.4	48	79.5	44	82.8	128
GENERAL INTERNAL MED	133.3	66	83.6	110	90.2	123	97.3	299
OTHER	107.7	13	68.4	19	27.8	18	64.0	50
RESEARCH	600.0	1	57.1	7	77.8	9	100.0	17
ADMINISTRATION	111.1	18	51.2	41	48.4	31	62.2	90
COMPLEXITY LEVEL								
I	100.8	129	72.4	185	65.2	178	77.2	492
II	92.1	76	83.8	117	66.9	124	79.2	317
III	106.8	74	102.5	118	90.6	128	98.7	320
IV	127.3	33	61.7	47	128.9	38	101.7	118
OVERALL AVERAGE	102.9	312	81.8	467	77.8	468	85.6	1247

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-19

VACANCY RATES
FULL AND PART-TIME VACANCIES
1985, 1986, 1987

	VACANCY RATE (%)				NUMBER OF VACANCIES			
SPECIALTY	1985	1986	1987	AVG	1985	1986	1987	TOTAL
SPECIALIZED SURGERY	3.1	4.1	3.9	3.7	46	64	62	172
GENERAL SURGERY	2.1	5.0	4.2	3.8	19	45	39	103
SPEC INTERNAL MED	2.6	3.0	3.8	3.2	66	77	99	242
ANESTHESIOLOGY	5.0	6.5	6.4	6.0	17	23	23	63
PSYCHIATRY/NEUROLOGY	3.5	5.3	7.0	5.3	84	125	171	380
PATHOLOGY	2.1	2.1	3.2	2.5	12	12	19	43
RADIOLOGY	2.4	5.4	5.8	4.6	21	49	54	124
GENERAL INTERNAL MED	2.5	3.7	4.0	3.4	48	74	87	209
OTHER	2.2	2.5	3.9	2.9	12	14	23	49
RESEARCH	0.8	0.4	0.8	0.7	2	1	2	5
ADMINISTRATION	2.6	4.4	5.1	4.1	16	27	31	74
COMPLEXITY LEVEL								
I	1.6	2.5	2.9	2.3	103	168	195	466
II	3.8	4.3	4.8	4.3	127	142	166	435
III	3.9	7.4	8.8	6.8	84	163	202	449
IV	6.1	7.4	9.0	7.5	29	35	45	109
OVERALL AVERAGE	2.8	4.0	4.7	3.8	343	508	608	1459

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1985, 1986, 1987.

TABLE IV-20

VACANCY RATES
FULL-TIME VACANCIES
1985, 1986, 1987

	VACANCY RATE (%)				NUMBER OF VACANCIES			
SPECIALTY	1985	1986	1987	AVG	1985	1986	1987	TOTAL
SPECIALIZED SURGERY	6.7	9.2	11.5	9.2	17	24	30	71
GENERAL SURGERY	3.2	8.4	7.4	6.3	12	31	26	69
SPEC INTERNAL MED	3.2	3.7	4.4	3.8	45	51	60	156
ANESTHESIOLOGY	5.9	7.2	8.2	7.0	12	16	18	46
PSYCHIATRY/NEUROLOGY	4.5	6.9	8.9	6.8	68	102	133	303
PATHOLOGY	1.1	1.6	3.3	2.0	5	7	15	27
RADIOLOGY	2.4	5.7	7.0	5.0	14	34	41	89
GENERAL INTERNAL MED	2.3	3.7	4.2	3.4	32	55	65	152
OTHER	3.0	2.9	4.7	3.5	10	10	16	36
RESEARCH	0.9	0.4	0.9	0.7	2	1	2	5
ADMINISTRATION	2.8	4.0	4.7	3.9	15	21	25	61
COMPLEXITY LEVEL								
I	1.6	3.0	3.4	2.7	55	103	114	272
II	4.3	5.0	5.7	5.0	76	86	99	261
III	4.3	7.4	9.4	7.1	75	130	172	377
IV	5.9	6.7	9.5	7.4	26	29	43	98
OVERALL AVERAGE	3.2	4.7	5.8	4.6	232	348	428	1008

Note: Excludes station numbers below 400, above 700 and station number 692. Excludes changes in duty status. Includes within VA transfers.

Source: Constructed from data in Physician Recruitment and Staffing Report (RCS 10-0166) and from PAID Master Files for January and December 1985, 1986, 1987.

TABLE IV-21

TOTAL CONTRACT COSTS BY SPECIALTY
FISCAL YEARS 1986, 1987, 1988

SPECIALTY	FY 1986 COSTS	NUMBER OF CONTRACTS	FY 1987 COSTS	NUMBER OF CONTRACTS	FY 1988 COSTS	NUMBER OF CONTRACTS
MEDICINE						
Allergy & Immunology	.	.	.	.	10,140	1
Cardiology	34,140	2	92,950	6	191,295	5
Chemotherapy Medicine	30,840	1	.	.	.	.
Dermatology	101,430	5	81,488	8	177,148	8
Endocrinology	.	.	.	.	6,000	1
Gastroenterology	24,960	1	84,851	1	98,851	2
General Internal Medicine	749,643	11	609,197	12	952,391	17
Geriatric Medicine	.	.	6,750	1	.	.
Hematology	36,000	1	42,000	1	.	.
Infectious Diseases	10,400	1	13,624	1	.	.
Multiple Specialties	.	.	59,500	1	.	.
Oncology	32,124	1	36,000	1	79,550	3
Other Medicine	.	.	76,896	1	.	.
Pulmonary Medicine	93,750	1	120,110	3	113,100	2
Renal Medicine	.	.	78,344	3	37,500	1
Rheumatology	.	.	20,020	2	49,400	2
TOTAL MEDICINE	$ 1,113,287	24	$ 1,321,729	41	$ 1,715,374	42
ANESTHESIOLOGY	$ 5,601,854	14	$ 7,759,785	18	$ 10,153,049	26
SURGERY						
Cardiothoracic Surgery	.	.	142,500	2	188,755	3
E.S.W. Lithotripsy	.	.	.	.	92,400	1
General Surgery	8,320	1	.	.	.	.
Gynecology	45,809	2	66,500	5	55,000	6
Neurosurgery	23,976	1	50,616	2	83,616	6
Ophthalmology	544,231	17	577,676	15	556,741	13
Orthopedics	916,341	14	1,238,056	14	1,239,341	18
Otolaryngology	127,289	7	181,149	7	71,615	3
Plastic Surgery	47,143	1	100,869	2	52,312	1
Renal Transplant Surgery	57,428	1	106,479	2	.	.
Special Surgery	.	.	162,016	4	24,100	1
Urology	452,696	10	721,010	11	857,697	14
TOTAL SURGERY	$ 2,223,233	54	$ 3,346,871	64	$ 3,221,577	66

(Continued on next page)

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TOTAL CONTRACT COSTS BY SPECIALTY
FISCAL YEARS 1986, 1987, 1988

SPECIALTY	FY 1986 COSTS	NUMBER OF CONTRACTS	FY 1987 COSTS	NUMBER OF CONTRACTS	FY 1988 COSTS	NUMBER OF CONTRACTS
PATHOLOGY						
Anatomic Lab	.	.	19,500	3	3,736	3
Clinical Lab	.	.	587,662	8	195,348	10
Electron Microscopy	.	.	.	.	45,470	1
Hematology (Pathology)	.	.	.	.	61,673	1
Pathology	173,372	6	1,193,983	11	1,214,479	14
Pathology-Surgical	.	.	32,160	1	.	.
TOTAL PATHOLOGY	$ 173,372	6	$ 1,833,305	23	$ 1,520,706	29
RADIOLOGY						
CT Scans	742,445	5	849,014	4	520,380	1
Magnetic Resonance Imaging	.	.	.	.	725,468	4
Mammography	.	.	.	.	18,000	1
Neuroradiology	61,093	1	.	.	.	.
Neurovascular Radiology	.	.	221,203	2	732,933	7
Radiation Therapy	275,136	3	3,387,710	14	3,074,144	23
Radiology	7,029,241	48	7,193,350	44	13,747,519	79
Radiology - Diagnostic	.	.	1,359,933	8	15,000	1
Radiotherapy	1,485,179	5	.	.	.	.
Special Procedures	.	.	1,170,119	4	.	.
TOTAL RADIOLOGY	$ 9,593,094	62	$ 14,181,329	76	$ 18,833,445	116
NUCLEAR MEDICINE	$ 542,888	8	$ 456,869	13	$ 556,757	8
PSYCHIATRY	$ 874,999	6	$ 129,254	3	$ 153,408	6
NEUROLOGY	$ 170,058	10	$ 367,363	13	$ 339,241	19
PHYSIATRY	$ 8,320	1	$ 22,550	2	$ 19,200	2
TOTAL	$ 20,301,105	185	$ 29,419,055	253	$ 36,512,757	314

Source: Scarce and Specialized Medical Resources, Emergency Management and Resource Sharing Services, Department of Medicine and Surgery, Veterans Administration.

TABLE IV-22

TOTAL FTE CONTRACT COSTS BY SPECIALTY
FISCAL YEARS 1986, 1987, 1988

SPECIALTY	FY 1986 COSTS	NUMBER OF CONTRACTS	FY 1987 COSTS	NUMBER OF CONTRACTS	FY 1988 COSTS	NUMBER OF CONTRACTS
MEDICINE						
Allergy & Immunology	.	.	.	.	.	.
Cardiology	16,640	1	.	.	125,000	1
Chemotherapy Medicine	30,840	2	.	.	.	.
Dermatology	12,480	1	32,686	2	33,240	2
Endocrinology	.	.	.	.	.	.
Gastroenterology	24,960	1	84,851	1	84,851	1
General Internal Medicine	194,000	1	358,695	4	162,489	4
Geriatric Medicine	.	.	.	.	.	.
Hematology	36,000	1	.	.	.	.
Infectious Diseases	.	.	.	.	.	.
Multiple Specialties	.	.	.	.	.	.
Oncology	.	.	36,000	1	.	.
Other Medicine	.	.	76,896	1	.	.
Pulmonary Medicine	.	.	8,424	1	.	.
Renal Medicine	.	.	60,299	1	37,500	1
Rheumatology	.	.	.	.	18,200	1
TOTAL MEDICINE	$ 314,920	6	$ 657,851	11	$ 461,280	10
ANESTHESIOLOGY	$ 5,411,441	10	$ 7,165,657	14	$ 8,648,466	18
SURGERY						
Cardiothoracic Surgery	.	.	.	.	.	.
E.S.W. Lithotripsy	.	.	.	.	.	.
General Surgery	8,320	1	.	.	.	.
Gynecology	.	.	.	.	.	.
Neurosurgery	.	.	.	.	.	.
Ophthalmology	50,000	1	.	.	62,000	1
Orthopedics	244,199	2	664,958	4	227,672	1
Otolaryngology	.	.	90,000	1	.	.
Plastic Surgery	47,143	1	100,869	2	52,312	1
Renal Transplant Surgery	57,428	1	106,479	2	.	.
Special Surgery	.	.	128,826	2	.	.
Urology	189,920	3	313,114	4	160,000	2
TOTAL SURGERY	$ 597,010	9	$ 1,404,246	15	$ 501,984	5

(Continued on next page)

TABLE IV-22 (p. 2)

TOTAL FTE CONTRACT COSTS BY SPECIALTY
FISCAL YEARS 1986, 1987, 1988

SPECIALTY	FY 1986 COSTS	NUMBER OF CONTRACTS	FY 1987 COSTS	NUMBER OF CONTRACTS	FY 1988 COSTS	NUMBER OF CONTRACTS
PATHOLOGY						
Anatomic Lab	.	.	.	.	.	.
Clinical Lab	.	.	52,000	1	80,000	1
Electron Microscopy	.	.	.	.	45,470	1
Hematology (Pathology)	.	.	.	.	.	.
Pathology	45,470	1	993,940	7	565,000	4
Pathology-Surgical	.	.	.	.	.	.
TOTAL PATHOLOGY	$ 45,470	1	$ 1,045,940	8	$ 690,470	6
RADIOLOGY						
CT Scans	.	.	.	.	.	.
Magnetic Resonance Imaging	.	.	.	.	5,288	1
Mammography	.	.	.	.	.	.
Neuroradiology	61,093	1	.	.	.	.
Neurovascular Radiology	.	.	67,203	1	405,666	4
Radiation Therapy	275,136	2	601,762	2	1,137,653	8
Radiology	4,640,285	16	2,227,389	13	8,211,682	25
Radiology - Diagnostic	.	.	614,533	3	15,000	.
Radiotherapy	1,040,200	2	.	.	.	.
Special Procedures	.	.	73,700	1	.	.
TOTAL RADIOLOGY	$ 6,016,714	21	$ 3,584,587	20	$ 9,775,289	38
NUCLEAR MEDICINE	$ 346,250	1	.	.	$ 381,660	3
PSYCHIATRY	$ 64,574	3	$ 10,654	1	$ 132,170	3
NEUROLOGY	$ 31,070	1	$ 261,056	5	$ 154,400	2
PHYSIATRY	$ 8,320	1	.	.	.	.
TOTAL	$ 12,835,769	53	$ 14,129,990	74	$ 20,745,718	85

Source: Scarce and Specialized Medical Resources, Emergency Management and Resource Sharing Services, Department of Medicine and Surgery, Veterans Administration.

TABLE IV-23

AVERAGE CONTRACT COST PER FTE BY SPECIALTY
FISCAL YEARS 1986, 1987, 1988

SPECIALTY	FY 1986 COSTS	NUMBER OF CONTRACTS	FY 1987 COSTS	NUMBER OF CONTRACTS	FY 1988 COSTS	NUMBER OF CONTRACTS
MEDICINE						
Allergy & Immunology	.	.	.	.	.	.
Cardiology	41,600	1	.	.	125,000	1
Chemotherapy Medicine	308,400	1	.	.	.	.
Dermatology	41,600	1	99,593	2	86,400	2
Endocrinology	.	.	.	.	.	.
Gastroenterology	41,600	1	136,856	1	136,856	1
General Internal Medicine	138,571	1	76,955	4	84,263	4
Geriatric Medicine	.	.	.	.	.	.
Hematology	58,065	1	.	.	.	.
Infectious Diseases	.	.	.	.	.	.
Multiple Specialties	.	.	.	.	.	.
Oncology	.	.	58,065	1	.	.
Other Medicine	.	.	59,151	1	.	.
Pulmonary Medicine	.	.	120,343	1	.	.
Renal Medicine	.	.	86,141	1	75,000	1
Rheumatology	.	.	.	.	182,000	1
AVERAGE	$ 104,973	6	$ 87,960	11	$ 102,871	10
ANESTHESIOLOGY	$ 132,835	10	$ 147,754	14	$ 141,819	18
SURGERY						
Cardiothoracic Surgery	.	.	.	.	.	.
E.S.W. Lithotripsy	.	.	.	.	.	.
General Surgery	41,600	1	.	.	.	.
Gynecology	.	.	.	.	.	.
Neurosurgery	.	.	.	.	.	.
Ophthalmology	166,667	1	.	.	206,667	1
Orthopedics	182,100	2	177,456	4	140,538	1
Otolaryngology	.	.	120,000	1	.	.
Plastic Surgery	94,286	1	100,896	2	104,624	1
Renal Transplant Surgery	82,040	1	58,464	2	.	.
Special Surgery	.	.	32,207	2	.	.
Urology	79,200	3	97,166	4	240,000	2
AVERAGE	$ 109,599	9	$ 106,775	15	$ 186,366	5

(Continued on next page)

TABLE IV-23 (p. 2)

AVERAGE CONTRACT COST PER FTE BY SPECIALTY
FISCAL YEARS 1986, 1987, 1988

SPECIALTY	FY 1986 COSTS	NUMBER OF CONTRACTS	FY 1987 COSTS	NUMBER OF CONTRACTS	FY 1988 COSTS	NUMBER OF CONTRACTS
PATHOLOGY						
Anatomic Lab	.	.	.	.	.	.
Clinical Lab	.	.	130,000	1	40,000	1
Electron Microscopy	.	.	.	.	45,470	1
Hematology (Pathology)	.	.	.	.	.	.
Pathology	45,470	1	114,420	7	172,917	4
Pathology-Surgical	.	.	.	.	.	.
AVERAGE	$ 45,470	1	$ 116,368	8	$ 129,523	6
RADIOLOGY						
CT Scans	.	.	.	.	.	.
Magnetic Resonance Imaging	.	.	.	.	105,760	1
Mammography	.	.	.	.	.	.
Neuroradiology	122,186	1	.	.	.	.
Neurovascular Radiology	.	.	134,406	1	117,693	3
Radiation Therapy	105,710	2	100,448	2	103,820	8
Radiology	124,767	16	126,475	13	145,727	25
Radiology - Diagnostic	.	.	149,035	3	.	.
Radiotherapy	153,685	2	.	.	.	.
Special Procedures	.	.	230,313	1	.	.
AVERAGE	$ 125,583	21	$ 132,845	20	$ 133,313	37
NUCLEAR MEDICINE	$ 138,500	1	.	.	$ 116,377	3
PSYCHIATRY	$ 108,925	3	$ 152,200	1	$ 110,719	3
NEUROLOGY	$ 103,567	1	$ 163,551	5	$ 151,538	2
PHYSIATRY	$ 41,600	1	.	.	.	.
OVERALL AVERAGE	$ 117,693	53	$ 124,264	74	$ 133,421	84

Source: Scarce and Specialized Medical Resources, Emergency Management and Resource Sharing Services, Department of Medicine and Surgery, Veterans Administration.

TABLE IV-24

COMPARISON OF FISCAL YEAR 1986 & 1987 AVERAGE CONTRACT COST PER FTE TO ACTUAL VA AND AMA 1986 & 1987 AVERAGE SALARIES

	1986	1987
INTERNAL MEDICINE		
1. AMA	$ 111,543	$ 124,620
2. VA (PAID)	75,990	78,019
3. VA (FTE)	104,973	87,960
SURGERY		
1. AMA	$ 166,359	$ 193,025
2. VA (PAID)	80,583	83,121
3. VA (FTE)	109,599	106,775
RADIOLOGY		
1. AMA	$ 169,206	$ 182,961
2. VA (PAID)	85,187	87,266
3. VA (FTE)	125,583	132,845
PSYCHIATRY		
1. AMA	$ 96,982	$ 106,630
2. VA (PAID)	77.655	79,831
3. VA (FTE)	108,925	.
ANESTHESIOLOGY		
1. AMA	$ 152,015	$ 164,620
2. VA (PAID)	82,357	85,455
3. VA (FTE)	132,835	147,754
PATHOLOGY		
1. AMA	$ 142,790	$ 131,795
2. VA (PAID)	85,034	86,727
3. VA (FTE)	.	116,368

Note: VA (PAID) salaries are for non-academic physicians.

Source: AMA, Department of Manpower and Demographic Studies
VA (PAID): Master Files for December 1986, 1987
VA (FTE) : see Table V-15

TABLE IV-25

RETIREES AGED 55 AND ABOVE,
AND AS A PERCENT OF TOTAL LOSSES
FOR 1985

OBS	QUARTER	YEAR	TOTAL LOSSES	NUMBER RETIREES	PERCENT OF TOTAL
1	1	79	329	31	9.4
2	1	80	377	45	11.9
3	1	81	308	42	13.6
4	1	82	259	65	25.1
5	1	83	302	31	10.3
6	1	84	280	40	14.3
7	1	85	230	30	13.0
8	1	86	194	38	19.6
9	1	87	260	35	13.5
10	2	79	281	60	21.4
11	2	80	333	64	19.2
12	2	81	385	71	18.4
13	2	82	397	64	16.1
14	2	83	285	51	17.9
15	2	84	312	87	27.9
16	2	85	263	61	23.2
17	2	86	328	135	41.2
18	2	87	342	74	21.6
19	3	79	446	50	11.2
20	3	80	527	40	7.6
21	3	81	449	38	8.5
22	3	82	488	54	11.1
23	3	83	347	48	13.8
24	3	84	373	38	10.2
25	3	85	298	28	9.4
26	3	86	558	87	15.6
27	3	87	389	42	10.8
28	4	79	592	53	9.0
29	4	80	577	51	8.8
30	4	81	506	37	7.3
31	4	82	443	47	10.6
32	4	83	415	42	10.1
33	4	84	420	38	9.0
34	4	85	265	27	10.2
35	4	86	468	60	12.8
36	4	87	498	44	8.8

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

TABLE IV-26

DESCRIPTIVE STATISTICS FOR TOTAL LOSSES,
RETIREES AGED 55 AND ABOVE, AND AS A PERCENT OF TOTAL LOSSES
BY QUARTER FOR 1985

	N Obs	Variable	Minimum	Maximum	Mean	Std Dev
FIRST QUARTER						
	9	TOTAL LOSSES	194.0	377.0	282.1	54.5
		RETIREES	30.0	65.0	39.7	10.9
		PERCENT OF TOTAL	9.4	25.1	14.5	4.9
SECOND QUARTER						
	9	TOTAL LOSSES	263.0	397.0	325.1	45.7
		RETIREES	51.0	135.0	74.1	24.9
		PERCENT OF TOTAL	16.1	41.2	22.9	7.6
THIRD QUARTER						
	9	TOTAL LOSSES	298.0	558.0	430.6	85.9
		RETIREES	28.0	87.0	47.2	16.8
		PERCENT OF TOTAL	7.6	15.6	10.9	2.5
FOURTH QUARTER						
	9	TOTAL LOSSES	265.0	592.0	464.9	97.8
		RETIREES	27.0	60.0	44.3	9.8
		PERCENT OF TOTAL	7.3	12.8	9.6	1.5

Source: Physician Recruitment and Staffing Report (RCS 10-0166)

SECTION V: ANALYSIS OF COMPENSATION IN THE VETERANS ADMINISTRATION

In this chapter, we examine the compensation of physicians and dentists within the VA. Evidence of salary compression among the physicians is presented. VA median salaries are compared to non-federal median salaries, for academic and non-academic physicians.

A. VA Salary Compression by Seniority and Specialty

In order to measure the degree of salary compression within the VA, we estimated a base salary regression using the December, 1987 PAID Master Files. The physician characteristics used to estimate the base salary were specialty, academic rank, board certification status, eligibility for special pay, place of medical school graduation, years of experience within the VA, and years of experience prior to entering the VA. Controlling for these factors allows us to estimate the average contribution each additional year of VA service makes to the base salary. The years of prior experience a physician had upon entering the VA was not directly available to us, so we made an approximation. We assumed that each physician graduated from college at the age of 21 and went directly from college to medical school and then residency. Prior experience was then calculated as the age of the physician less his years of VA experience and years of schooling, including the residency. The length of residency was determined for each specialty from the AMA Directory of Graduate Medical Education Programs.

The results are presented in Table V-1. The base salary column

is the regression estimate for a full-time, non-academic, U.S. medical school graduate. We have calculated the salary by years of VA service. This represents the average salary a physician can expect to receive upon entering the VA and for subsequent years should he or she remain in the VA. The estimates make no attempt to adjust for possible changes in the salary schedule nor to account for inflation. The results indicate that, on average, a physician could expect to make 78.7 percent of the 1987 allowable maximum salary of $72,500 upon entering the VA in 1987. In 1987, over 98 percent of all full-time physicians were receiving special pay. The total pay column is the sum of the base salary, primary special pay ($7,000), incentive special pay for full-time status ($6,000), and tenure pay. For those eligible and receiving special pay, the maximum total pay in 1987 was $95,000, based upon the $22,500 limit on total special pay. Incentive special pay is subject to an offset, the amount of which is determined by the employee's grade and step. We used the Chief grade, step 8-10, offset amount of $2,682 to reduce the maximum total pay to $92,318. Thus, entry level total pay of $70,047 is 75.9 percent of the allowable maximum. The regression estimates that a board-certified physician receive a higher base salary than a non-board-certified physician. In addition, for eligible physicians, there is incentive special pay for board certification in the amount of $2,000. The total pay, as listed in the board-certified column, includes both of these additional monies. The physician is now up to 81.2 percent of the maximum as soon as he or she enters the VA. By the eighth year of service, the total pay is over 90 percent. The

table clearly indicates that there is little incentive for a long-term employment in the VA, based strictly upon the relative salary levels.

We performed a similar analysis for individual specialties. The results for specialized surgery and general internal medicine are presented in Appendix Tables A-26 and A-27. Comparing these two tables shows not only the salary compression but also how little average salary difference there is between the two specialties.

B. Non-VA Salary Variations by Seniority and Specialty

Salary compression does not tell us whether VA salaries are higher or lower than other employers of physicians. To understand the VA's advantages and disadvantages relative to the general marketplace for physicians, we divided the comparisons into two groups:

1. We compared VA physicians with academic appointments to medical school faculty members; and
2. We compared VA physicians without academic appointments to physicians in HMO's, DOD, and the non-federal "private sector."

As a general rule, the VA pays better or comparable salaries for general physicians, but for most specialties and levels of experience, VA salaries are lower.

Medical school faculties show substantial variation in compensation across academic ranks. Table V-2 presents medical school compensation from the AAMC for two types of appointments: faculty receiving a base salary only and faculty receiving a base salary plus supplemental pay (including clinic fees). We formed a

composite estimate by taking a weighted average of the base group and the base plus supplement group. Appendix Tables A-14 through A-22 present the detailed AAMC median salary information by specialty and academic rank for the years 1985, 1986, and 1987.

As the academic rank increases, there is a corresponding increase in annual compensation. From assistant to associate professor, the median compensation increases from $83,448 to $105,088, and from associate to full professor, the median compensation increases from $105,088 to $124,813. Among VA physicians with an academic appointment, the range in total pay across ranks is much smaller. The difference in median compensation between a VA assistant professor and a VA full professor is only $4,500 a year.

Employers outside the VA also show substantial variations in compensation across specialties. Table V-3 summarizes data from the AAMC on medical school compensation and data from the AMA on full-time non-federal physicians. The specialty categories in Table V-3 represent a synthesis of the different classification schemes used by the AAMC and the AMA. Readers should consult Appendix Tables A-12 and A-13 to see how we translated AAMC specialties into AMA and VA specialties. Specialty compensation for medical school faculty members ranges from $75,955 a year in general practice to $130,495 a year in surgery. Specialty compensation for non-federal physicians ranges from $80,000 a year in general practice to $170,000 a year in radiology. Not surprisingly, the specialty differentials among VA physicians are much smaller, ranging from $75,853 a year in general practice to $89,794 in radiology, anesthesiology, and pathology.

Appendix Tables A-23 through A-25 present the detailed comparison of the VA salaries to the AMA.

While experienced specialists can generally earn more outside the VA, it is important to realize that entry level physicians, particularly generalists, often do quite well at the VA. In table V-2, a physician with the academic rank of instructor can earn $61,804 a year at a medical school and $83,794 a year at the VA. A physician with the academic rank of assistant professor can earn $83,448 a year at a medical school and $85,294 a year at the VA. Tables V-4 and V-5 compare HMO and VA median salaries for both general medicine and selected specialties. The general medicine category combines internal medicine, general practitioners, and family practitioners. In the field of general medicine, VA physicians earn more than HMO physicians, but in selected specialty fields, VA physicians earn less than HMO physicians. The median compensation for VA physicians in general medicine was $78,547 in 1987 (compared to an HMO salary of $73,194 in 1987). The median compensation for VA physicians in selected specialties was $83,800 in 1987 (compared to an HMO salary of $100,446 in 1987).

In order to compare entry level salaries in the VA to those in DOD, we need to make some assumptions regarding the number of years of active military duty. For simplicity, we will assume that an individual entering the military has no prior years of active duty. We also assume that he or she enters the military before attending medical school. Given that they remain in the military to complete their medical training, they will accumulate approximately 10 to 12

years of active service (4 years of medical school, 1 year of internship, 4 years of residency, and a minimum of 2 years obligated service). At a minimum, we assume that the first staff position will be a major (grade 0-4). Table A-28 in the Appendix presents average military compensation for the grades 0-4 to 0-6, beginning at 10 years of active service, for 1987. Following the RMC columns are the special pay categories, variable special pay (VSP), board-certified pay (BCP), and additional special pay (ASP). Another category, incentive special pay (ISP), varies by specialty and years of active duty. ISP is not included in the calculation of DOD total pay. A board-certified physician, eligible for special pay, will receive, on average, the total pay figures presented in the table. The grade 0-4, total pay of $65,080 is greater than the instructor level average in the AAMC. A comparison to the VA instructor level total pay indicates that, on average, the VA looks very favorable. This difference will be reduced by the addition of ISP to the DOD figures.

Before discussing recommendations, we should note several characteristics of dental compensation at the VA. Table V-6 compares faculty salaries at dental schools to the compensation of VA dentists with academic appointments. It appears to tell a familiar story. Median salaries at dental schools range from $32,600 for instructors to $64,000 for full professors. By contrast, VA dentists with academic appointments show almost no variation in median compensation. VA dentists with the rank of instructor earn $68,889, and VA dentists with the rank of full professor earn $73,544, a difference of less than $5,000. It would appear that VA dentists,

like VA physicians, have "over-compressed" salaries.

Table V-6, however, is misleading in several respects. If we construct a regression estimate of entry salaries for VA dentists, we find that, in fact, VA dentists span a wide range of salaries. Table V-7 summarizes the base salary regression estimates for full-time VA dentists and shows that total pay ranges from $49,461 in the first year to $75,061 in the twenty-fourth year. Unlike VA physicians who reach 90 percent of their maximum salary after six to eight years of DMS service, VA dentists do not reach 90 percent of their maximum salary until approximately 16 years of DMS service. Thus, VA dentists do not appear to be "over-compressed." Instead, the small number of VA dentists with faculty appointments in Table V-6 are more likely to be a sub-set of older dentists with substantial years of DMS seniority (recall in Table III-8 that VA dentists tend to have more years of DMS seniority than VA physicians). Appendix Tables A-30 and A-31 present regression results for full-time dentists in specialized and general dentistry, respectively.

Potentially a more serious problem for VA dentists is the lack of a salary differential for specialty work. Table V-8 summarizes information on mean net incomes for independent dentists collected by the American Dental Association (ADA). Independent dentists include sole proprietors, partners, and shareholders.

> "Net income from the primary practice is what the dentist reported as income (after practice expenses but before personal taxes) from a primary practice. Net income from private practice is the net income from the primary practice plus income earned

from a secondary private practice. Total net income from all dental sources includes net income from primary practice, net income from secondary practice, and any other income derived from other dental sources, such as teaching in a dental school, consulting, or working as a hospital staff dentist." (p. 5, ADA, The 1987 Survey of Dental Practice, Income from the Private Practice of Dentistry).

We have compared the mean VA base pay to primary practice income, VA total pay (base pay plus special pay) to private practice income, and VA total compensation (total pay plus outside remuneration) to the ADA total net income. The table indicates that in 1987 there was a salary difference of $33,260 between VA dental specialists and dental specialists in the private sector.

TABLE V-1

BASE SALARY REGRESSION ESTIMATES
FULL-TIME PHYSICIANS
1987

YEARS OF SERVICE	BASE SALARY	PERCENT MAXIMUM	TOTAL PAY	PERCENT MAXIMUM	TOTAL PAY BOARD CERT	PCT MAX
0	$ 57,047	78.7	$ 70,047	75.9	$ 74,995	81.2
2	58,763	81.1	72,763	78.8	77,710	84.2
4	60,328	83.2	74,328	80.5	79,275	85.9
6	61,744	85.2	76,744	83.1	81,691	88.5
8	63,011	86.9	79,011	85.6	83,958	90.9
10	64,127	88.5	80,127	86.8	85,074	92.2
12	65,094	89.8	81,094	87.8	86,041	93.2
14	65,912	90.9	81,912	88.7	86,859	94.1
16	66,579	91.8	82,579	89.5	87,527	94.8
18	67,097	92.5	83,097	90.0	88,045	95.4
20	67,466	93.1	83,466	90.4	88,413	95.8
22	67,685	93.4	83,685	90.6	88,632	96.0
24	67,754	93.5	83,754	90.7	88,701	96.1

Note: Base salary is the regression estimate for non-academic, full-time, special-pay eligible physicians. The maximum is $72,500. Total pay is base salary plus primary and incentive special pay. The maximum is $92,318. Total pay, board certified is total pay plus incentive special pay for Board Certification. The maximum total pay is $92,318.

TABLE V-2

AAMC, VA AVERAGE MEDIAN SALARY
BY FACULTY RANK
1985, 1986, 1987

YEAR	AAMC BASE PAY	COUNT	AAMC BASE PLUS SUPPL PAY	COUNT	AAMC WEIGHTED AVERAGE	VA BASE PAY	VA TOTAL PAY	VA TOTAL COMP	COUNT
					INSTRUCTOR				
85	$ 46,565	382	$ 62,126	651	$ 56,372	$ 66,198	$ 81,258	$ 81,525	242
86	47,200	421	62,980	756	57,336	66,198	81,258	82,258	252
87	50,997	384	66,035	981	61,804	69,976	83,794	85,146	245
					ASSISTANT PROFESSOR				
85	71,059	1729	76,261	5239	74,970	67,940	83,258	84,274	716
86	75,536	1762	79,504	5488	78,539	67,940	83,258	84,354	706
87	80,105	1866	84,450	6224	83,448	69,976	85,294	87,028	694
					ASSOCIATE PROFESSOR				
85	90,061	1057	96,192	3254	94,689	67,940	83,758	87,758	355
86	93,071	1072	101,021	3384	99,108	67,940	83,758	87,758	333
87	100,384	1046	106,387	3787	105,088	69,976	85,794	89,794	328
					PROFESSOR				
85	106,352	1112	112,063	3693	110,742	67,940	87,758	89,617	260
86	112,927	1164	118,489	3833	117,193	67,940	87,758	90,968	251
87	121,520	1201	125,771	4128	124,813	69,976	89,794	93,294	228

Notes: VA Median salaries are for full-time academic physicians. The clinical ranks have been excluded. VA base pay is the base salary. VA total pay is basic pay plus special pay. VA total compensation is total pay plus outside renumeration.

TABLE V-3

MEDIAN SALARY COMPARISON
FULL-TIME PHYSICIANS
1987

SPECIALTY	AMA	Count	AAMC	Count	VA	Count	AMA/AAMC	AAMC/VA
Internal Medicine	$ 100,000	542	$ 86,717	7420	$ 81,706	2685	1.15	1.06
Surgery	164,000	550	130,495	3376	85,294	550	1.26	1.53
Radiology	170,000	170	113,210	1734	89,794	441	1.50	1.26
Psychiatry	95,000	203	83,507	1769	82,294	1180	1.14	1.01
Anesthesiology	160,000	148	117,129	1649	89,734	202	1.37	1.31
Pathology	130,000	75	88,674	1526	89,794	436	1.47	0.99
General/Family Prac.	80,000	469	75,955	716	75,853	115	1.05	1.00
Other	102,000	231	85,211	1427	85,294	607	1.20	1.00
Overall Average	$ 120,225	2388	$ 98,510	19617	$ 83,779	6216	1.18	1.18

Note: VA salaries include academic and non-academic physicians. Overall average is a weighted average of the medians.

Source: VA, PAID Master Files, December 1987.
AMA, Department of Manpower and Demographic Studies.
AAMC salaries constructed from Appendix Table A-22 using the classifications in Appendix Table A-12.

TABLE V-4

MEDIAN SALARIES
HMO AND VA PHYSICIANS AND DENTISTS
1986

	HMO SALARY	COUNT	VA SALARY	VA TOTAL PAY	VA TOTAL COMP.	COUNT
PHYSICIANS						
GENERAL MEDICINE						
INTERNAL MEDICINE	$ 69,464	1015	$ 62,714	$ 76,581	$ 76,774	1087
GENERAL PRACTITIONER	61,647	36	57,759	72,746	72,746	37
FAMILY PRACTITIONER	67,420	343	60,972	74,839	74,839	39
AVERAGE	68,591	1594	62,498	76,401	76,581	1163
OTHER						
CARDIOLOGIST	94,463	34	64,456	80,016	80,516	107
DERMATOLOGIST	82,078	52	67,940	81,730	83,258	17
GASTROENTEROLOGIST	.	.	66,198	79,516	79,516	71
GENERAL SURGEON	95,438	133	67,940	82,258	83,258	232
ORTHOPEDIC SURGEON	129,000	75	67,940	87,758	87,758	50
PSYCHIATRIST	85,314	120	64,456	78,774	79,516	879
RADIOLOGIST	100,080	62	67,940	87,758	87,758	325
AVERAGE	97,249	476	65,823	81,399	81,973	1681
PHYSICIAN AVERAGE	75,181	2070	64,463	79,355	79,768	2844
DENTISTS						
STAFF DENTIST	47,142	129	60,972	65,746	66,222	612

Notes: HMO salaries are as of January, 1987. VA salaries are for full-time, non-academic physicians and dentists as of December, 1986.

VA total pay is base salary plus special pay. VA total compensation is total pay plus outside remuneration.

Source: The HMO Executive Salary Survey, Spring, 1987, Henry W. Warren & Associates, Inc.

TABLE V-5

MEDIAN SALARIES
HMO AND VA PHYSICIANS AND DENTISTS
1987

	HMO SALARY	COUNT	VA SALARY	VA TOTAL PAY	VA TOTAL COMP.	COUNT
PHYSICIANS						
GENERAL MEDICINE						
INTERNAL MEDICINE	$ 74,554	1083	$ 64,594	$ 78,852	$ 78,852	1117
GENERAL PRACTITIONER	63,799	51	59,488	74,212	74,212	61
FAMILY PRACTITIONER	71,495	585	62,800	76,852	76,852	45
AVERAGE	73,194	1719	64,273	78,547	78,547	1223
OTHER:						
CARDIOLOGIST	98,010	50	66,388	81,706	82,794	103
DERMATOLOGIST	85,942	61	69,976	83,294	84,294	17
GASTROENTEROLOGIST	98,207	30	68,182	82,000	82,294	71
GENERAL SURGEON	101,028	158	69,976	84,294	85,294	226
ORTHOPEDIC SURGEON	125,001	99	69,976	89,794	89,794	50
PSYCHIATRIST	86,654	121	68,182	81,500	82,000	865
RADIOLOGIST	103,156	81	69,976	89,794	89,794	322
AVERAGE	100,446	600	68,737	83,800	84,289	1654
PHYSICIAN AVERAGE	80,245	2319	66,840	81,567	81,848	2877
DENTISTS						
STAFF DENTIST	51,565	150	64,594	68,889	68,889	617

Notes: HMO salaries are as of January, 1988. VA salaries are for full-time, non-academic physicians and dentists as of December, 1987.

VA total pay is base salary plus special pay. VA total compensation is total pay plus outside remuneration.

Source: The HMO Executive Salary Survey, Spring, 1988, Henry W. Warren & Associates, Inc.

TABLE V-6

MEDIAN SALARIES
FULL-TIME DENTISTS
AMERICAN ASSOCIATION OF DENTAL SCHOOLS (AADS) AND VA
1987

FACULTY RANK	BASE SOURCE	TOTAL SALARY	TOTAL PAY	COMP	COUNT
Professor	AADS	$ 64,000	$.	$.	455
	VA	69,976	73,544	75,123	6
Clinical Professor	AADS	.	.	.	.
	VA	69,976	75,419	81,460	4
Associate Professor	AADS	50,750	.	.	768
	VA	69,976	73,706	75,500	12
Associate Clinical Professor	AADS	.	.	.	.
	VA	69,976	77,294	77,294	9
Assistant Professor	AADS	41,500	.	.	844
	VA	69,976	73,544	73,544	46
Assistant Clinical Professor	AADS	.	.	.	.
	VA	69,976	72,477	72,477	30
Instructor	AADS	32,600	.	.	117
	VA	64,594	68,889	68,889	22
Clinical Instructor	AADS	.	.	.	.
	VA	69,976	72,477	73,544	57
Lecturer	AADS	30,000	.	.	19
	VA	69,976	76,794	76,794	7
TRA	AADS	30,700	.	.	24
	VA	.	.	.	.
Other Titles	AADS	36,250	.	.	38
	VA	69,976	72,477	72,477	21

Notes: Total Pay is the sum of base pay and special pay. Total Compensation is the sum of Total Pay and any outside remuneration.

AADS salaries are total annual guaranteed salaries. Non-salary benefits are not included, nor is any non-guaranteed compensation.

Source: American Association of Dental Schools, Faculty Salary Survey, Summary Report, 1987-88, Table 1, p. 3.

TABLE V-7

BASE SALARY REGRESSION ESTIMATES
FULL-TIME DENTISTS
1987

YEARS	BASE SALARY	PERCENT MAXIMUM	TOTAL PAY	PERCENT MAXIMUM
0	45,961	63.4	49,461	62.0
2	49,718	68.6	53,718	67.3
4	53,166	73.3	57,166	71.6
6	56,303	77.7	60,303	75.6
8	59,129	81.6	63,629	79.7
10	61,645	85.0	66,145	82.9
12	63,850	88.1	68,350	85.6
14	65,745	90.7	70,245	88.0
16	67,329	92.9	71,829	90.0
18	68,603	94.6	73,103	91.6
20	69,566	96.0	74,066	92.8
22	70,219	96.9	74,719	93.6
24	70,561	97.3	75,061	94.0

Note: Base salary is the regression estimates for non-academic, full-time dentists. Total pay is base salary plus primary special pay and incentive special pay. The maximum total pay is $79,818.

TABLE V-8

MEAN SALARIES
FULL-TIME DENTISTS
AMERICAN DENTAL ASSOCIATION (ADA) AND VA
1985, 1986

PRACTICE TYPE	SOURCE	PRIMARY PRACTICE	PRIVATE PRACTICE	TOTAL	COUNT
		1985			
Independent Dentists	ADA	$ 72,040	$ 72,620	$ 73,460	1796
	VA	60,489	65,057	65,059	836
General Practice	ADA	66,030	66,540	67,190	.
	VA	59,677	63,504	63,504	593
Specialist	ADA	108,720	110,090	112,170	.
	VA	62,470	68,847	68,853	243
		1986			
Independent Dentists	ADA	$ 76,180	$ 76,640	$ 77,560	2047
	VA	60,667	65,151	65,970	832
General Practice	ADA	71,990	72,450	73,610	.
	VA	59,643	63,181	63,607	556
Specialist	ADA	102,390	103,380	103,990	.
	VA	62,728	69,118	70,730	276

Notes: ADA mean incomes are for dentists who work 32 hours or more per week. Income is net income before taxes. The count for total independent dentists is the number who worked 30 hours or more per week.

Source: The 1986 and 1987 Survey of Dental Practice, Income from the Private Practice of Dentistry, American Dental Association, Tables 5-6.

SECTION VI: RECOMMENDATIONS

Based on a review of the information in Sections I through V, KAG wishes to recommend several changes in VA special pay. We will concentrate primarily on special pay for physicians with some concluding remarks on special pay for dentists.

Table VI-1 summarizes the basic information, described elsewhere in this report, on physician compensation, recruitment and retention. Table VI-1 presents the following items:

- The median 1987 compensation by specialty for associate professors in a medical school (median compensation represents a weighted average of faculty members receiving a base salary only and faculty members receiving base salary plus a supplement);
- The median 1987 total pay by specialty for VA physicians with an academic appointment of associate professor (total pay represents VA base pay plus any special pay);
- The average vacancy rate by specialty for full-time physicians in the years 1985 through 1987;
- The average turnover rate by specialty for full-time physicians in the years 1985 through 1987;
- The average replacement rate by specialty for full-time, board-certified physicians in the years 1985 through 1987;
- The relative ranking of the rate scores, with the score of "1" assigned to the specialty with highest vacancy rate, the highest turnover rate, and the lowest replacement rate;
- The average relative ranking of the rate scores (the sum of the ranks for each specialty divided by three);
- The proportion of physicians by specialty in full-time duty status.

The table is divided into two parts: Physician specialties where medical school compensation and VA compensation differ by more than

33 percent, and physician specialties where medical school compensation and VA compensation differ by less than 33 percent. Within these compensation groups, the specialties are sorted from high to low by the overall ranking of the turnover, replacement, and vacancy rates.

I. Primary and Tenure Pay

It seems clear that the VA has reached the point of salary compression for physicians where there is very little, if any, monetary incentive for a long-term career in the VA. In 1987, approximately 70 percent of new physicians entered the VA in the Chief Grade (Grade 15) and within the Chief Grade, almost 30 percent started in the top three steps (steps 8, 9, 10). We estimate that VA physicians reach 90 percent of their maximum total pay within six to eight years of DMS service.

To increase the rewards for long-term service, the VA needs to expand the special pay for tenure. A variety of standards could be employed, but KAG believes, at a minimum, that experienced VA staff physicians should maintain parity with associate professors in medical schools. VA physicians with the rank of associate professor in 1987 had, on average, 14 years of DMS service and total pay of $85,294. Associate professors in medical schools earned $105,088 in 1987 or approximately $20,000 a year more. To achieve parity with associate professors in medical schools, we recommend that the

VA adopt a tenure schedule that reaches $20,000 after 14 years of DMS service:

Years of DMS Service	Tenure Pay
0-1 Years	$ 0
2-3 Years	$ 3,000
4-5 Years	$ 6,000
6-7 Years	$ 9,000
8-9 Years	$12,000
10-11 Years	$15,000
12-13 Years	$18,000
14-17 Years	$20,000
18-20 Years	$22,000

In addition:

1. Primary special bonus, now given to all participants eligible for special pay, functions very much like an automatic "sign-up bonus." Given the high turnover in the first years of service, primary pay does not seem to be a cost-effective way of recruiting physicians to the VA. If primary pay is reduced to $2,000 (a $5,000 savings), tenure pay could be increased to $25,000 after 14 years of service.

2. If possible, special pay contracts should be written so that employees are rewarded for signing long-term agreements. Currently an employee who signs four separate one-year contracts receives exactly the same tenure pay as someone who signs a single four-year agreement. This policy should be revised so that longer agreements receive substantially higher tenure pay than shorter agreements. For example, a four-year agreement might allow 100 percent of the tenure pay for the relevant years of service, but a one-year agreement might only allow 25 percent of the scheduled tenure pay.

3. To ensure productivity and an efficient allocation of resources, some part of the tenure bonus should be determined by performance in addition to time-in-grade seniority (see the Recommendations from the January 11-12, 1989 Meeting of the Field Advisory Council).

II. Incentives for Specialties and Administrative Duties

Public Law 96-330 sets forth two criteria for modifying special pay levels:

> "...(i) Whenever the Veterans' Administration is unable to recruit or retain a sufficient work force of well-qualified physicians and dentists because the incomes of non-Veterans' Administration physicians and dentists performing comparable types of duties are significantly in excess of the levels of total pay (including basic pay and special pay) of Veterans' Administration physicians and dentists, or (ii) whenever other extraordinary circumstances are such that special pay levels are needed to recruit or retain a sufficient number of well-qualified physicians and dentists."

The first criterion requires a significant income discrepancy but imposes an "insufficiency" standard for recruitment and retention. The second criteria deletes the income requirement but imposes an "extraordinary" standard for recruitment and retention.

Income Discrepancy. We believe four physician specialties meet the income discrepancy standard:

	Ratio AAMC/VA Compensation	Full-Time Certified Replacement
o Special surgery	1.65	81.7
o Anesthesiology	1.50	74.2
o General surgery	1.51	83.3
o Radiology	1.38	82.8

All four of these specialties have medical school compensations at least one-third higher than the VA, and after searching for at least one year, all have replaced less than ninety percent of their full-time, board-certified losses. Assuming no change in primary pay, the income disparities between the AAMC and the VA range from $58,094 to $34,407:

Specialty	AAMC Median	VA Median	Difference
Special surgery	$147,888	$89,794	$58,094
Anesthesiology	$134,636	$89,794	$44,842
General surgery	$129,634	$85,794	$43,840
Radiology	$124,201	$89,794	$34,407

We recommend that the VA adopt the following incentive schedule for these physician specialties:

Specialty	AAMC, VA Difference Adjusted for $20,000 New Tenure Schedule	KAG Recommended Incentive Pay
Special surgery	$38,094	$38,000
Anesthesiology	$24,842	$25,000
General surgery	$23,840	$24,000
Radiology	$14,407	$14,000

Extraordinary Circumstances. Among the specialties with no major income discrepancies, it seems clear that psychiatry potentially has serious recruitment and retention problems. Psychiatry consistently ranks third from the top in all three measures of vacancies, turnover, and staff replacements. After recruitment efforts lasting at least one year, psychiatry still has not replaced 26.1 percent of its full-time, board-certified losses. Since, by national compensation standards at least, VA psychiatrists appear to be within 10 percent of their medical school counterparts ($89,760 for the AAMC and $84,294 for the VA), we cannot recommend a uniform specialty incentive pay for VA psychiatrists. However, by the evidence available to us, it does appear likely that VA psychiatrists are experiencing localized staffing difficulties (whether caused by regional salary differences, working conditions,

etc. we do not know), and we recommend that the VA set aside up to $5,000 in geographical location pay to meet these needs.

The administrative category is also a major candidate for extraordinary circumstances. After searching for at least one year, 37.8 percent of these positions have still not found board-certified, full-time replacements, and we know from our limited study of Chief of Staff losses, that approximately one-third (35%) of the Chiefs of Staff on January 1, 1985 had left by December 31, 1987. It is difficult to know what are the most appropriate counterparts in medical schools to the VA positicns of Service Chief and Chief of Staff. We assume, based on discussions with DMS staff members, that Service Chiefs are roughly comparable to full professors and that Chiefs of Staff are roughly comparable to Department Chairmen. By that criterion, we observe the following compensation differences:

AAMC Position	AAMC Median	VA Position	VA Median
Full Professor	$124,813	Service Chief	$89,794
Chairman	$172,810	Chief of Staff	$92,318

VA Position	AAMC, VA Difference	AAMC, VA Difference Adjusted for $20,000 New Tenure Schedule
Service Chief	$35,019	$15,019
Chief of Staff	$80,492	$60,492

We, therefore, recommend that the VA provide $15,000 in special incentive pay for Service Chiefs and at least $30,000 (more if

possible) in special incentive pay for Chiefs of Staff.

III. Other Issues

We recommend continuation of the following categories of special pay at their current scheduled rates:

- o Incentive pay for board certification
- o Incentive pay for full-time status
- o Incentive pay for special geographic location

We also strongly recommend that the statutory maximum limitations on incentive special pay and total special pay be eliminated so that VA physicians can earn all the special pays to which they are entitled (including the elimination of the special pay offsets).

Finally, we close with some remarks on VA dentists. VA dentists appear to be compensated as well as or better than many of their non-VA counterparts, but our analysis of dental compensation has been hampered in several ways. The data sources on non-VA dentists are not nearly as numerous nor as comprehensive as the data sources on non-VA physicians. In particular, we only know the guaranteed base salary for dental school faculty members which does not include any supplemental income they may receive from such sources as clinic fees. Comparisons to median VA salaries are also somewhat misleading because VA dentists tend to remain with the VA for a long time and therefore have relatively high seniority and step levels. Our regression estimates for entry-level VA dental salaries come much closer to the salary levels prevalent outside the VA (particularly for assistant and associate professors on dental

faculties). Even with these limitations in mind, however, we do not find a pattern of evidence that warrants substantial departures from the current special pays for VA dentists. The one area that appears to require an adjustment is the area of dental specialties. Dental specialists, at least in the private sector, can earn approximately 47 percent more than their counterparts in the VA ($103,990 for specialists outside the VA and $70,730 for specialists inside the VA). To reduce this disparity, we recommend that the VA set aside at least $30,000 for specialty pay in dentistry.

TABLE VI-1

SUMMARY OF PHYSICIAN RESULTS
ON COMPENSATION, RECRUITMENT, AND RETENTION

PHYSICIAN SPECIALTY	MEDIAN COMPENSATION: MEDICAL SCHOOL ASSOCIATE PROFESSOR 1987	MEDIAN COMPENSATION: VA ASSOCIATE PROFESSOR 1987	FULL-TIME VACANCY RATE 85-87	FULL-TIME TURNOVER RATE 85-87	FULL-TIME CERTIFIED REPLACEMENT RATE 85-87	VACANCY RANK 85-87	TURNOVER RANK 85-87	REPLACEMENT RANK 85-87	AVERAGE RANK 85-87	PERCENT FULL-TIME 1985
INCOME DIFFERENCES ABOVE 33 PERCENT										
SPECIAL SURGERY	$ 147,888	$ 89,794	9.3	12.2	81.7	1	1.5	5	2.5	16.25
ANESTHESIOLOGY	134,636	89,794	7.0	8.8	74.2	2	5	4	3.7	63.24
GENERAL SURGERY	129,634	85,794	6.3	10.3	83.3	4	4	7	5.0	42.20
RADIOLOGY	124,201	89,794	5.0	8.6	82.8	5	6	6	5.7	66.63
INCOME DIFFERENCES BELOW 33 PERCENT										
PSYCHIATRY/NEUROLOGY	89,760	84,294	6.8	11.0	73.9	3	3	3	3.0	62.65
ADMINISTRATION	-	89,794	3.9	8.2	62.2	6	7	1	4.7	87.07
OTHER	92,278	89,794	3.5	7.6	64.0	8	8	2	6.0	60.18
GENERAL INTERNAL	90,931	85,294	3.4	12.2	97.3	9	1.5	8	6.2	73.00
SPECIAL INTERNAL	-	85,294	3.8	5.6	103.0	7	9	11	9.0	54.58
PATHOLOGY	89,718	89,794	2.0	4.5	100.0	10	10	9.5	9.8	78.15
RESEARCH	-	76,976	0.7	3.2	100.0	11	11	9.5	10.5	98.88
TOTAL	$ 105,088	$ 85,294	4.6	9.0	85.6					58.39

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TABLE A-1

VA STATION INFORMATION
BY VA COMPLEXITY LEVEL

LEVEL=1

STATION NUM	NAME	CENSUS DIV	SMSA	AFFIL	CMPLX_CD	TOTAL PHYS	%ACA APPOINT	TOTAL BEDS	%BEDS MEDICAL	%BEDS SURG	%BEDS PSYCH
691	WEST LOS ANGELES,CA	PAC	LARGE MET	Y	280.1	262	41.60	1225	42.86	17.55	39.59
541	CLEVELAND, OH	ENC	LARGE MET	Y	255.4	177	32.77	1200	33.58	21.00	45.42
527	BROOKLYN, NY	MIDATL	LARGE MET	Y	252.6	215	17.67	911	67.18	21.62	11.20
600	LONG BEACH, CA	PAC	LARGE MET	Y	249.9	208	21.15	1029	72.40	14.67	12.93
580	HOUSTON, TX	WSC	LARGE MET	Y	243.0	167	59.28	947	43.08	23.55	33.26
657	ST. LOUIS, MO	WNC	LARGE MET	Y	241.3	161	54.66	815	49.08	20.61	30.31
618	MINNEAPOLIS, MN	WNC	LARGE MET	Y	241.0	177	58.76	710	48.59	37.46	13.94
546	MIAMI, FL	SO ATL	LARGE MET	Y	238.3	183	57.92	651	55.76	20.28	23.96
640	PALO ALTO, CA	PAC	LARGE MET	Y	237.1	180	33.89	1277	33.52	8.85	57.64
630	NEW YORK, NY	MIDATL	LARGE MET	Y	235.0	182	32.97	856	50.58	32.24	17.17
578	NINES, IL	ENC	LARGE MET	Y	233.2	219	48.86	1164	57.56	21.82	20.62
549	DALLAS, TX	WSC	LARGE MET	Y	232.6	98	48.98	680	40.00	35.00	25.00
642	PHILADELPHIA, PA	MIDATL	LARGE MET	Y	232.0	145	42.76	431	47.10	41.53	11.37
695	MILWAUKEE, WI	ENC	LARGE MET	Y	231.3	181	81.22	649	57.47	28.04	14.48
598	LITTLE ROCK, AR	WSC	SMALL MET	Y	226.9	158	42.41	1305	43.30	17.62	39.08
688	WASHINGTON, DC	SO ATL	LARGE MET	Y	225.8	166	21.69	598	47.83	22.58	29.60
664	SAN DIEGO, CA	PAC	LARGE MET	Y	224.1	166	81.93	562	46.44	35.23	18.33
525	BROCKTON/W.ROXBURY, MA	NEW ENG	LARGE MET	Y	221.7	133	42.11	907	55.02	8.16	36.82
673	TAMPA, FL	SO ATL	LARGE MET	Y	221.3	162	54.94	632	45.25	31.01	23.73
648	PORTLAND, OR	PAC	LARGE MET	Y	219.4	133	39.85	567	53.97	32.28	13.58
537	CHICAGO(WS), IL	ENC	LARGE MET	Y	218.9	120	45.00	484	45.04	37.60	17.36
662	SAN FRANCISCO, CA	PAC	LARGE MET	Y	216.9	153	41.83	354	37.01	48.87	14.12
660	SALT LAKE CITY, UT	MTN	SMALL MET	Y	216.0	102	54.90	382	48.69	28.53	22.77
665	SEPULVEDA, CA	PAC	LARGE MET	Y	214.2	143	42.66	548	52.19	15.69	32.12
455	SAN JUAN, PR	POSS	LARGE MET	Y	212.8	173	38.73	692	40.32	25.00	34.68
573	GAINESVILLE, FL	SO ATL	NONSMSA	Y	212.6	121	32.23	478	39.54	41.63	18.83
506	ANN ARBOR, MI	ENC	LARGE MET	Y	211.8	130	50.00	276	42.75	35.87	21.01
646	PITTSBURGH(UD), PA	MIDATL	LARGE MET	Y	209.2	99	55.10	616	69.32	30.68	.
583	INDIANAPOLIS, IN	ENC	LARGE MET	Y	208.8	85	51.76	450	47.33	31.33	21.33
629	NEW ORLEANS, LA	WSC	LARGE MET	Y	208.7	120	46.67	403	51.12	29.78	19.11
521	BIRMINGHAM, AL	ESC	SMALL MET	Y	208.2	100	65.00	414	52.17	47.83	.
528	BUFFALO, NY	MIDATL	LARGE MET	Y	207.6	138	56.52	732	58.06	25.00	16.94
671	SAN ANTONIO, TX	WSC	LARGE MET	Y	206.3	142	67.61	674	42.43	30.86	26.71
652	RICHMOND, VA	SO ATL	SMALL MET	Y	205.8	163	53.99	694	65.56	22.91	11.53
663	SEATTLE, WA	WNC	LARGE MET	Y	205.5	127	70.08	430	51.16	27.91	20.93
554	DENVER, CO	MTN	LARGE MET	Y	205.3	125	45.60	311	41.48	35.37	23.15
596	LEXINGTON, KY	ESC	SMALL MET	Y	204.6	107	52.34	904	59.73	14.38	25.88
508	ATLANTA, GA	SO ATL	LARGE MET	Y	203.4	103	68.93	483	49.07	31.06	19.88
614	MEMPHIS, TN	ESC	SMALL MET	Y	202.3	139	64.03	858	55.71	23.31	20.98
561	EAST ORANGE, NJ	MIDATL	LARGE MET	Y	201.8	163	28.83	720	63.33	22.08	14.58
523	BOSTON, MA	NEW ENG	LARGE MET	Y	201.5	162	59.88	616	55.68	30.36	13.96
632	NORTHPORT, NY	MIDATL	LARGE MET	Y	200.8	140	57.14	753	43.69	14.34	41.97
500	ALBANY, NY	MIDATL	SMALL MET	Y	200.6	96	55.21	502	60.76	19.72	19.52

VA STATION INFORMATION
BY VA COMPLEXITY LEVEL

LEVEL=2

STATION NUM	NAME	CENSUS DIV	SMSA	AFFIL	CMPLX_CD	TOTAL PHYS	%ACA APPOINT	TOTAL BEDS	%BEDS MEDICAL	%BEDS SURG	%BED PSYC
626	NASHVILLE, TN	ESC	SMALL MET	Y	197.0	93	40.86	428	45.79	43.46	10.7
358	BURNAM, NC	SO ATL	NONSMSA	Y	196.6	97	50.52	383	38.90	41.78	19.3
553	ALLEN PARK	ENC	LARGE MET	Y	196.2	103	40.78	498	53.82	21.89	24.1
526	BRONX, NY	MIDATL	LARGE MET	Y	195.7	157	43.95	656	54.57	35.82	9.7
612	MARTINEZ, CA	PAC	LARGE MET	Y	194.4	106	30.19	402	51.74	32.84	15.4
605	LOMA LINDA, CA	PAC	LARGE MET	Y	194.3	119	44.54	402	52.74	32.34	14.9
689	WEST HAVEN, CT	NEW ENG	SMALL MET	Y	192.0	129	22.48	641	53.82	22.31	23.7
589	KANSAS CITY, MO	WNC	LARGE MET	Y	187.7	90	45.56	401	42.14	35.41	22.4
539	CINCINNATI, OH	ENC	LARGE MET	Y	186.1	92	41.30	349	42.98	35.82	21.4
635	OKLAHOMA CITY, OK	WSC	SMALL MET	Y	185.7	131	83.97	399	45.11	29.82	25.0
501	ALBUQUERQUE, NM	MTN	SMALL MET	Y	185.6	79	43.04	419	43.68	32.70	23.6
509	AUGUSTA, GA	SO ATL	SMALL MET	Y	184.7	113	70.80	1037	45.32	11.86	42.8
516	BAY PINES, FL	SO ATL	LARGE MET	Y	179.3	132	34.85	648	57.10	23.15	19.7
644	PHOENIX, AZ	MTN	LARGE MET	Y	178.3	83	3.61	471	44.80	26.33	28.8
512	BALTIMORE, MD	SO ATL	LARGE MET	Y	173.5	78	74.36	238	55.88	32.77	10.9
590	HAMPTON, VA	SO ATL	NONSMSA	Y	173.5	66	18.18	410	51.46	21.71	26.8
678	TUCSON, AZ	MTN	SMALL MET	Y	173.2	85	40.00	296	44.31	37.25	16.1
586	JACKSON, MS	ESC	NONSMSA	Y	172.2	70	47.14	433	56.73	27.81	15.4
535	CHICAGO(LS), IL	ENC	LARGE MET	Y	171.5	100	59.00	448	61.38	29.69	8.9
544	COLUMBIA, SC	SO ATL	SMALL MET	Y	170.6	82	7.32	460	59.13	27.83	13.0
607	MADISON, WI	ENC	SMALL MET	Y	169.2	80	81.25	301	50.83	41.20	7.9
650	PROVIDENCE, RI	NEW ENG	NONSMSA	Y	169.2	77	23.38	301	59.47	20.27	19.9
670	SYRACUSE, NY	MIDATL	SMALL MET	Y	169.0	56	71.43	266	57.14	30.45	12.4
543	COLUMBIA, MO	WNC	NONSMSA	Y	167.5	59	62.71	330	42.73	40.61	16.6
534	CHARLESTON, SC	SO ATL	SMALL MET	Y	165.0	58	79.31	280	45.71	30.00	24.2
584	IOWA CITY, IA	WNC	NONSMSA	Y	164.8	87	45.98	282	38.30	45.04	16.3
603	LOUISVILLE, KY	ESC	SMALL MET	Y	164.7	85	78.82	330	46.97	38.18	14.8
552	DAYTON, OH	ENC	SMALL MET	Y	162.5	76	18.42	340	63.52	28.15	8.3
556	HO. CHICAGO, IL	ENC	LARGE MET	Y	162.5	103	44.66	1064	37.22	6.86	35.9
636	OMAHA, NE	WNC	SMALL MET	Y	161.8	70	84.29	368	50.82	32.07	17.1
658	SALEM, VA	SO ATL	NONSMSA	Y	159.0	66	30.30	225	44.41	10.68	45.2
627	NEWINGTON, CT	NEW ENG	LARGE MET	Y	158.6	68	54.41	186	40.86	37.63	20.9
405	WHITE RIVER JCT, VT	NEW ENG	NONSMSA	Y	155.2	40	72.50	155	48.39	29.68	21.2
621	MOUNTAIN HOME, TN	ESC	NONSMSA	Y	154.7	57	38.60	443	57.11	26.64	16.4
570	FRESNO, CA	PAC	SMALL MET	Y	153.7	55	34.55	218	49.54	34.40	16.0
674	TEMPLE, TX	WSC	NONSMSA	Y	153.0	76	14.47	515	54.17	28.35	17.4
667	SHREVEPORT, LA	WSC	NONSMSA	Y	151.2	99	44.07	344	55.23	29.65	15.1

VA STATION INFORMATION
BY VA COMPLEXITY LEVEL

LEVEL=3

STATION NUM	NAME	CENSUS DIV	SMSA	AFFIL	CMPLX_CD	TOTAL PHYS	%ACA APPOINT	TOTAL BEDS	%BEDS MEDICAL	%BEDS SURG	%BEDS PSYCH
693	WILKES BARRE, PA	MIDATL	NONSMSA	Y	149.1	66	30.30	435	55.17	24.14	20.69
637	ASHEVILLE, NC	SO ATL	NONSMSA	Y	143.4	46	30.43	450	68.67	24.89	6.44
518	BEDFORD, MA	NEW ENG	LARGE MET	Y	142.9	67	40.30	735	47.07	.	52.93
654	RENO, NV	MTN	NONSMSA	Y	142.3	39	38.46	158	57.59	22.15	20.25
550	DANVILLE, IL	ENC	NONSMSA	Y	141.5	55	20.00	860	60.58	6.98	32.44
555	DES MOINES, IA	WNC	SMALL MET	Y	141.0	47	4.26	273	68.50	31.50	.
623	MUSKOGEE, OK	ENC	NONSMSA	Y	138.6	37	37.84	193	59.07	40.93	.
520	BILOXI, MS	ESC	NONSMSA	Y	136.8	59	15.25	660	39.39	9.39	51.36
531	BOISE, ID	MTN	NONSMSA	Y	136.3	32	3.12	163	54.60	26.99	18.40
581	HUNTINGTON, WV	SO ATL	SMALL MET	Y	136.0	45	77.78	180	66.11	33.89	.
505	AMERICAN LAKE, WA	PAC	LARGE MET	Y	133.2	35	20.00	419	30.55	.	69.45
542	COATESVILLE, PA	MIDATL	NONSMSA	Y	132.8	55	32.73	977	44.52	.	55.48
437	FARGO, ND	WNC	NONSMSA	Y	132.7	30	50.00	165	60.00	40.00	.
613	MARTINSBURG, WV	SO ATL	NONSMSA	Y	132.6	55	5.45	369	65.04	15.45	19.51
460	WILMINGTON, DE	SO ATL	LARGE MET	Y	132.0	48	39.58	259	57.92	41.31	0.77
620	MONTROSE, NY	MIDATL	LARGE MET	Y	131.7	61	19.67	1073	45.29	.	54.71
608	MANCHESTER, NH	NEW ENG	NONSMSA	Y	131.3	32	12.50	162	53.70	27.78	18.52
438	SIOUX FALLS, SD	WNC	NONSMSA	Y	128.0	29	62.07	246	51.63	32.93	15.04
645	PITTSBURGH(HD), PA	MIDATL	LARGE MET	Y	126.3	31	35.48	707	49.79	.	50.21
677	TOPEKA, KS	WNC	NONSMSA	Y	126.2	46	28.26	808	33.17	7.05	59.78
533	CASTLE POINT, NY	MIDATL	LARGE MET	N	125.4	32	12.50	256	73.44	26.56	.
659	SALISBURY, NC	SO ATL	NONSMSA	N	125.4	49	12.24	779	45.57	5.13	49.29
686	LEAVENWORTH, KS	WNC	NONSMSA	Y	125.2	38	18.42	403	61.04	8.68	30.27
685	WACO, TX	WSC	NONSMSA	Y	125.0	48	0.00	986	42.09	.	57.91
452	WICHITA, KS	WNC	NONSMSA	Y	124.3	39	38.46	158	51.90	40.51	7.59
599	LIVERMORE, CA	PAC	LARGE MET	N	123.0	25	12.00	158	100.00	.	.
402	TOGUS, ME	NEW ENG	NONSMSA	N	121.6	59	10.17	392	43.88	12.50	43.62
515	BATTLE CREEK, MI	ENC	NONSMSA	N	120.9	48	6.25	786	41.86	.	58.14
641	PERRY POINT, MD	SO ATL	LARGE MET	Y	118.6	34	20.59	715	58.18	.	41.82
504	AMARILLO, TX	WSC	NONSMSA	Y	117.8	40	42.50	132	55.30	44.70	.
604	LYONS, NJ	MIDATL	LARGE MET	Y	117.6	67	7.46	1168	36.56	.	63.44
595	LEBANON, PA	MIDATL	NONSMSA	N	115.4	46	8.70	825	48.24	3.52	48.24
631	NORTHAMPTON, MA	NEW ENG	LARGE MET	N	114.9	35	20.00	452	46.24	.	53.76
565	FAYETTEVILLE, NC	SO ATL	SMALL MET	Y	112.7	35	2.86	311	63.34	26.69	9.97
597	LINCOLN, NE	WNC	NONSMSA	Y	112.2	21	4.76	179	36.87	30.73	32.40
656	ST. CLOUD, MN	WNC	NONSMSA	DK	111.5	27	3.70	577	40.55	.	59.45
594	LAKE CITY, FL	SO ATL	NONSMSA	Y	110.7	28	7.14	324	77.47	22.53	.
513	BATAVIA, NY	MIDATL	NONSMSA	Y	109.0	28	3.57	164	100.00	.	.
622	MURFREESBORO, TN	ESC	NONSMSA	Y	107.7	42	16.67	617	45.87	7.13	47.16
592	KNOXVILLE, IA	WNC	NONSMSA	N	106.7	17	0.00	447	47.87	.	51.90
676	TOMAH, WI	ENC	NONSMSA	N	106.6	23	4.35	798	41.73	.	58.27
502	ALEXANDRIA, LA	WSC	NONSMSA	Y	106.5	28	7.14	306	63.73	25.16	11.11
679	TUSCALOOSA, AL	ESC	NONSMSA	Y	106.5	29	34.48	582	39.35	.	60.65
610	MARION, IN	ENC	NONSMSA	Y	105.5	31	9.68	693	57.86	.	42.14
557	DUBLIN, GA	SO ATL	NONSMSA	N	105.3	30	0.00	295	87.80	10.51	1.69
538	CHILLICOTHE, OH	ENC	NONSMSA	N	104.8	37	0.00	837	44.68	.	55.32
609	MARION, IL	ENC	NONSMSA	Y	104.7	28	10.71	171	77.78	22.22	.
514	BATH, NY	MIDATL	NONSMSA	Y	104.3	23	13.04	208	87.50	.	12.50
575	GRAND JUNCTION, CO	MTN	NONSMSA	DK	103.2	11	0.00	115	53.91	22.61	23.48
680	TUSKEGEE, AL	ESC	NONSMSA	Y	103.2	51	5.88	732	53.42	6.42	40.16
653	ROSEBURG, OR	PAC	NONSMSA	N	103.0	25	4.00	326	49.39	6.75	43.87
668	SPOKANE, WA	PAC	SMALL MET	DK	102.2	23	13.04	154	72.08	27.27	.
562	ERIE, PA	MIDATL	SMALL MET	N	101.7	21	9.52	138	71.01	28.99	.
532	CANANDAIGUA, NY	MIDATL	NONSMSA	Y	101.0	32	18.75	975	61.54	.	38.56

VA STATION INFORMATION
BY VA COMPLEXITY LEVEL

LEVEL=4

STATION NUM	NAME	CENSUS DIV	SMSA	AFFIL	CMPLX_CD	TOTAL PHYS	%ACA APPOINT	TOTAL BEDS	%BEDS MEDICAL	%BEDS SURG	%BEDS PSYCH
540	CLARKSBURG, WV	SO ATL	NONSMSA	Y	99.9	19	10.53	184	50.54	28.80	20.11
649	PRESCOTT, AZ	MTN	NONSMSA	DK	99.9	22	9.09	191	70.16	14.14	15.71
619	MONTGOMERY, AL	ESC	SMALL MET	DK	99.0	21	4.76	200	86.00	14.00	.
567	FT. LYON, CO	MTN	NONSMSA	DK	98.8	18	0.00	335	40.30	.	59.70
687	WALLA WALLA, WA	PAC	NONSMSA	Y	98.3	14	14.29	119	52.10	16.81	31.09
655	SAGINAW, MI	ENC	NONSMSA	DK	96.8	24	4.17	155	72.26	27.74	.
522	BONHAM, TX	WSC	NONSMSA	N	96.7	10	0.00	78	80.77	.	19.23
529	BUTLER, PA	NIDATL	NONSMSA	N	96.7	16	0.00	226	100.00	.	.
517	BECKLEY, WV	SO ATL	NONSMSA	N	95.3	18	0.00	174	67.82	32.18	.
566	FT. HOWARD, MD	SO ATL	LARGE MET	Y	95.3	19	21.05	211	91.94	.	8.06
503	ALTOONA, PA	NIDATL	NONSMSA	N	94.9	18	0.00	103	82.52	17.48	.
574	GRAND ISLAND, NE	WNC	NONSMSA	DK	93.3	14	7.14	121	61.98	21.49	16.53
591	KERRVILLE, TX	WSC	NONSMSA	N	92.6	26	3.85	255	87.06	12.94	.
585	IRON MOUNTAIN, MI	ENC	NONSMSA	N	92.5	24	4.17	205	52.68	32.68	14.63
519	BIG SPRING, TX	WSC	NONSMSA	Y	92.3	21	0.00	209	57.42	21.05	21.53
647	POPLAR BLUFF, MO	WNC	NONSMSA	N	92.1	16	6.25	176	83.52	16.48	.
442	CHEYENNE, WY	MTN	NONSMSA	N	91.9	14	0.00	125	59.20	24.80	16.00
564	FAYETTEVILLE, AR	WSC	NONSMSA	Y	91.9	25	16.00	187	64.17	31.02	4.28
568	FT. MEADE SD	WNC	NONSMSA	Y	90.8	19	52.63	349	46.99	10.60	42.41
569	FT. WAYNE, IN	ENC	SMALL MET	DK	88.6	18	0.00	175	72.57	18.86	8.57
579	HOT SPRINGS, SD	WNC	NONSMSA	Y	85.9	21	19.05	232	68.53	14.66	16.81
666	SHERIDAN, WY	MTN	NONSMSA	DK	84.9	15	6.67	339	37.46	.	62.54
617	MILES CITY, MT	MTN	NONSMSA	DK	83.9	6	16.67	91	79.12	20.88	.
436	FT. HARRISON, MT	MTN	NONSMSA	DK	80.6	17	0.00	150	64.67	27.33	8.00
611	MARLIN, TX	WSC	NONSMSA	Y	77.5	11	9.09	202	100.00	.	.

LEVEL=5

101	C.O.-WASHINGTON,D.C.	SO ATL	LARGE MET	.	0	39	41.03	.	.	.	.
358	R.O.-MANILA, PI	.	.	.	0	4	25.00	.	.	.	.
359	R.O.-HONOLULU, HI	PAC	SMALL MET	.	0	13	46.15	.	.	.	.
363	R.O.-ANCHORAGE, AK	PAC	SMALL MET	.	0	2	0.00	.	.	.	.

LEVEL=6

692	DOM-WHITE CITY, OR	PAC	NONSMSA	.	0	13	0.00	.	.	.	.
750	IOC-BOSTON, MA	NEW ENG	LARGE MET	.	0	68	26.47	.	.	.	.
752	IOC-LOS ANGELES, CA	PAC	LARGE MET	.	0	39	17.95	.	.	.	.
756	IOC-EL PASO, TX	WSC	SMALL MET	.	0	12	33.33	.	.	.	.
757	IOC-COLUMBU, OH	ENC	LARGE MET	.	0	30	43.33	.	.	.	.
758	IOC-LAS VEGAS, NV	MTN	SMALL MET	.	0	11	18.18	.	.	.	.

Sources:

Census Division and SMSA: Information supplied by Dr. Richard Ullke, American Medical Association, October 27, 1988
CMPX_CD: Memorandum from the Director, Management Support Office (10M), December 26, 1986
Total Physicians and Percent with Academic Appointment: Paid Master File for December 1985
Total Beds, % Medical, % Surgical, % Psychi.: Administration of Veterans Affairs, Annual Report, 1987, Table 10, pp.180-182
University Affiliation: Five Year Medical Facility Development Plan, FY 1989-1993

TABLE A-2

REGRESSION ANALYSIS OF TOTAL COMPENSATION FOR FULL-TIME VA PHYSICIANS AND DENTISTS
TOTAL FULL-TIME COMPENSATION (SALARY, SPECIAL PAY, AND OUTSIDE REMUNERATION)
AS A FUNCTION OF COMPLEXITY LEVELS, SPECIALTIES, AND YEARS OF DMS SERVICE
PAID MASTER FILE FOR DECEMBER 1985

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE
MODEL (see below)	33	602828506663	18267530504	207.47	0.0001	0.465767
ERROR	7853	691442744864	88048229			
CORRECTED TOTAL	7886	1294271251527				

MODEL	DF	SUM OF SQUARES	F VALUE	PR > F
MAIN EFFECTS:				
COMPLEXITY LEVELS (I & II) (III & IV)	1	96541359	1.10	0.2951
SPECIALTIES (INC. RESEARCH & ADMIN.)	12	258896392706	245.03	0.0001
YEARS OF DMS SERVICE	4	151019029148	428.80	0.0001
INTERACTIONS:				
COMPLEXITY LEVELS AND SPECIALTIES	12	3467285421	3.28	0.0001
COMPLEXITY LEVELS AND YEARS OF DMS SERVICE	4	10046362364	28.53	0.0001

TABLE A-3

STAFF SUPERVISORY LEVEL BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

SUPERVISORY LEVEL / SPECIALTY	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHE-SIOLOGY	PSYCHIA/NEUROL	PATHO-LOGY	RADIO-LOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINIS-TRATION	TOTAL
NON-SUPER	1274	670	2018	262	1968	375	607	1712	189	436	365	234	230	10340
	88.11	77.46	81.47	81.62	85.57	65.56	70.83	90.30	70.52	71.36	66.97	96.30	39.12	79.61
SUPERVIS	172	195	459	59	332	197	250	184	79	175	180	9	358	2649
	11.89	22.54	18.53	18.38	14.43	34.44	29.17	9.70	29.48	28.64	33.03	3.70	60.88	20.39
TOTAL	1446	865	2477	321	2300	572	857	1896	268	611	545	243	588	12989
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00

FREQUENCY MISSING = 8

TABLE A-4

STAFF SUPERVISORY LEVEL BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

SUPERVISORY LEVEL / TYPE OF STATION	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL 4	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
NON-SUPERVISORY	5633	2673	1694	348	22	165	10535
	82.35	78.99	74.53	69.60	31.88	81.68	79.40
SUPERVISORY	1207	711	579	152	47	37	2733
	17.65	21.01	25.47	30.40	68.12	18.32	20.60
TOTAL	6840	3384	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

TABLE A-5

STAFF GRADE LEVEL BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

GRADE LEVEL

SPECIALTY

FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHE-SIOLOGY	PSYCHIA/NEUROL	PATHO-LOGY	RADIO-LOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINIS-TRATION	TOTAL
OTHER	223	90	302	52	339	32	38	369	48	171	80	110	211	2065
	15.42	10.40	12.19	16.20	14.74	5.59	4.43	19.46	17.91	27.99	14.68	45.27	35.88	15.90
GRADE 15	1223	775	2175	269	1961	540	819	1527	220	440	465	133	377	10924
	84.58	89.60	87.81	83.80	85.26	94.41	95.57	80.54	82.09	72.01	85.32	54.73	64.12	84.10
TOTAL	1446	865	2477	321	2300	572	857	1896	268	611	545	243	588	12989
ROW PERCENT	11.13	6.66	19.07	2.47	17.71	4.40	6.60	14.60	2.06	4.70	4.20	1.87	4.53	100.00

FREQUENCY MISSING = 8

TABLE A-6

STAFF GRADE LEVEL BY TYPE OF STATION
PAID MASTER FILE FOR DECEMBER 1985

GRADE LEVEL	TYPE OF STATION						
FREQUENCY / COLUMN PERCENT	COMPLEX LEVEL I	COMPLEX LEVEL II	COMPLEX LEVEL III	COMPLEX LEVEL IV	REGIONAL CENTERS	OUTPAT CLINICS	TOTAL
OTHER	1118	520	340	89	51	29	2147
	16.35	15.37	14.96	17.80	73.91	14.36	16.18
GRADE 15	5722	2866	1933	411	18	173	11121
	83.65	84.63	85.04	82.20	26.09	85.64	83.82
TOTAL	6840	3386	2273	500	69	202	13268
ROW PERCENT	51.55	25.50	17.13	3.77	0.52	1.52	100.00

FREQUENCY MISSING = 0

TABLE A-7

COMPLEXITY LEVELS I AND II: FULL TIME STAFF BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

DUTY STATUS	SPECIALTY													
FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIAL INTERNAL	ANESTHESIOLOGY	PSYCHIA/NEUROL	PATHOLOGY	RADIOLOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINISTRATION	TOTAL
FULL TIME	153	200	1124	171	970	363	466	718	203	378	249	229	369	5593
	11.76	29.63	51.56	59.38	56.82	77.07	64.19	63.37	89.82	96.68	55.83	95.82	84.63	54.73
PART TIME	1148	475	1056	117	737	108	260	415	23	13	197	10	67	4626
	88.24	70.37	48.44	40.63	43.18	22.93	35.81	36.63	10.18	3.32	44.17	4.18	15.37	45.27
TOTAL	1301	675	2180	288	1707	471	726	1133	226	391	446	239	436	10219
ROW PERCENT	12.73	6.61	21.33	2.82	16.70	4.61	7.10	11.09	2.21	3.83	4.36	2.34	4.27	100.00

FREQUENCY MISSING = 5

TABLE A-8

COMPLEXITY LEVELS III AND IV: FULL TIME STAFF BY TYPE OF SPECIALTY
PAID MASTER FILE FOR DECEMBER 1985

DUTY STATUS	SPECIALTY													
FREQUENCY / COLUMN PERCENT	SPECIAL SURGERY	GENERAL SURGERY	SPECIALT INTERNAL	ANESTHE-SIOLOGY	PSYCHIA/NEUROL	PATHO-LOGY	RADIO-LOGY	GENERAL INTERNAL	SPECIAL DENT	GENERAL DENT	OTHER	RESEARCH	ADMINIS-TRATION	TOTAL
FULL TIME	82	165	228	32	471	84	105	666	41	215	79	4	143	2315
	56.55	86.84	76.77	96.97	79.43	83.17	80.15	87.29	97.62	97.73	79.80	100.00	94.08	83.57
PART TIME	63	25	69	1	122	17	26	97	1	5	20	0	9	455
	43.45	13.16	23.23	3.03	20.57	16.83	19.85	12.71	2.38	2.27	20.20	0.00	5.92	16.43
TOTAL	145	190	297	33	593	101	131	763	42	220	99	4	152	2770
PERCENT	5.23	6.86	10.72	1.19	21.41	3.65	4.73	27.55	1.52	7.94	3.57	0.14	5.49	100.00

FREQUENCY MISSING = 3

TABLE A-9

MULTIVARIATE CHI-SQUARE ANALYSIS OF EMPLOYMENT DUTY STATUS AMONG VA PHYSICIANS AND DENTISTS: LIST OF VARIABLES

DEPENDENT VARIABLE	MODEL NOTATION	VALUES
EMPLOYMENT DUTY STATUS	[D]	FULL-TIME EMPLOYMENT PART-TIME EMPLOYMENT
EXPLANATORY VARIABLES		
PATIENT SPECIALTIES	[S]	SURGERY (GENERAL AND SPECIALIZED), INTERNAL MEDICINE, ANESTHESIOLOGY, RADIOLOGY, PATHOLOGY, PSYCHIATRY AND NEUROLOGY, GENERAL INTERNAL MEDICINE, DENTAL (GENERAL AND SPECIALIZED), OTHER SPECIALTIES.
STATION COMPLEXITY LEVELS	[L]	COMPLEXITY LEVELS 1-2 COMPLEXITY LEVELS 3-4
ACADEMIC APPOINTMENT	[A]	NO YES

TABLE A-10

MULTIVARIATE CHI-SQUARE ANALYSIS OF EMPLOYMENT DUTY STATUS
AMONG VA PHYSICIANS AND DENTISTS: SELECTED MODELS
PAID MASTER FILE FOR DECEMBER 1985

MODELS	DEGREES OF FREEDOM	LIKELIHOOD RATIO CHI SQUARE	LIKELIHOOD RATIO PROBABILITY	EXPLAINED VARIATION MODEL COMPARISONS*	EXPLAINED VARIATION PERCENT INCREASE
1. [LSA] [D]	27	3024.22	0.0		
2. [LSA] [AD]	26	2336.24	0.0	2-1	22.75
3. [LSA] [LD]	26	2163.88	0.0	3-1	28.45
4. [LSA] [SD]	21	1093.69	0.0	4-1	63.84
5. [LSA] [AD] [LD]	25	1767.01	0.0		
6. [LSA] [SD] [AD]	20	611.58	0.0	6-1	79.78
7. [LSA] [SD] [LD]	20	421.14	0.0	7-1	86.07
8. [LSA] [SD] [LD] [AD]	19	132.75	0.0	8-1	95.61
9. [LSA] [LAD]	24	1749.91	0.0		
10. [LSA] [ASD]	14	576.10	0.0		
11. [LSA] [LSD]	14	320.20	0.0	11-1	89.41
12. [LSA] [ASD] [LD]	13	112.38	0.0		
13. [LSA] [LAD] [SD]	18	107.07	0.0		
14. [LSA] [LSD] [AD]	13	41.21	0.0001	14-1	98.64
15. [LSA] [LAD] [ASD]	12	90.78	0.0000		
16. [LSA] [LSD] [LAD]	12	23.90	0.0210	16-1	99.21
17. [LSA] [LSD] [ASD]	7	27.59	0.0003		
18. [LSA] [LSD] [LAD] [ASD]	6	12.40	0.0536		

* The model comparisons represent differences in likelihood Chi-Square values between two models compared to the Chi-Square value for Model 1, the "benchmark" model without independent variables. Thus, the comparison between models 1 and 2 equal ((3024.22 - 2336.24)/3024.22) x 100 or 22.75 percent.

TABLE A-11

MULTIVARIATE CHI-SQUARE ANALYSIS OF EMPLOYMENT DUTY STATUS
AMONG VA PHYSICIANS AND DENTISTS
EXPECTED RATIOS OF FULL-TIME TO PART-TIME EMPLOYMENT
PAID MASTER FILE FOR DECEMBER 1985

MODEL	LEVEL	ACADEMIC APPOINTMENT	SURGERY	SPECIAL. INTERNAL	ANESTHES.	PSYCH.	GENERAL INTERNAL	DENTAL	OTHER
4. [LSA] [SD]	I-II	NO	0.35	1.20	2.30	1.68	2.70	19.10	1.51
		YES	0.35	1.20	2.30	1.68	2.70	19.09	1.51
	III-IV	NO	0.35	1.20	2.30	1.68	2.70	19.09	1.51
		YES	0.35	1.20	2.31	1.68	2.70	19.63	1.50
7. [LSA] [SD] [LD]	I-II	NO	0.27	1.04	1.96	1.23	1.70	14.59	1.21
		YES	0.27	1.04	1.96	1.23	1.70	14.58	1.21
	III-IV	NO	1.14	4.36	8.24	5.18	7.15	61.43	5.09
		YES	1.14	4.35	8.22	5.19	7.13	65.00	5.06
11. [LSA] [LSD]	I-II	NO	0.22	1.06	2.06	1.32	1.73	15.76	1.26
		YES	0.22	1.06	2.06	1.32	1.73	15.67	1.26
	III-IV	NO	2.79	3.27	4.93	3.84	6.81	36.87	3.82
		YES	2.78	3.27	4.95	3.84	6.80	35.67	3.76
14. [LSA] [LSD] [AD]	I-II	NO	0.31	1.55	2.96	1.81	2.22	21.32	1.74
		YES	0.15	0.76	1.44	0.88	1.09	10.38	0.85
	III-IV	NO	3.17	4.02	5.75	4.54	7.46	41.78	4.51
		YES	1.55	1.97	2.79	2.22	3.64	19.63	2.17

TABLE A-12

AAMC SPECIALTIES CLASSIFIED BY AMA CATEGORIES

GENERAL INTERNAL MEDICINE:

- Cardiology
- Internal Medicine
- Gastroenterology

SURGERY:

- General Surgery
- Neurosurgery
- Ophthalmology
- Orthopedic Surgery
- Plastic Surgery
- Thoracic and Cardiovascular Surgery
- Urology
- Otolaryngology

RADIOLOGY:

- Radiology

PSYCHIATRY:

- Psychiatry

ANESTHESIOLOGY:

- Anesthesiology

PATHOLOGY:

- Pathology

OTHER:

- Dermatology
- Neurology
- Preventive Medicine
- Physical Medicine and Rehabilitation
- Public Health

GENERAL AND FAMILY PRACTICE:

- Family Practice

APPENDIX A-13

AAMC SPECIALTIES CLASSIFIED BY KAG CATEGORIES

GENERAL SURGERY:

- General Surgery

SPECIALIZED SURGERY:

- Thoracic and Cardiovascular Surgery
- Plastic Surgery
- Neurosurgery
- Ophthalmology
- Orthopedic Surgery
- Otolaryngology
- Urology

ANESTHESIOLOGY:

- Anesthesiology

PATHOLOGY:

- Pathology

RADIOLOGY:

- Radiology

PSYCHIATRY - NEUROLOGY:

- Psychiatry
- Neurology

OTHER:

- Dermatology
- Preventive Medicine
- Public Health
- Physical Medicine and Rehabilitation

Note: Internal Medicine and other Medicine categories are excluded.

TABLE A-14

AAMC MEDIAN SALARY BY FACULTY RANK
FACULTY RECEIVING BASE COMPONENT ONLY
1985

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 87,000	43	$ 99,000	110	$ 120,000	46	$ 126,000	36	$ 105,051	235
CARDIOLOGY	39,000	19	80,000	75	98,000	53	115,000	40	88,422	187
THOR & CARDIO SURG	.	.	120,000	17	148,000	9	169,000	16	144,667	42
JERMATOLOGY	.	.	65,000	27	85,000	13	95,000	15	77,909	55
FAMILY PRACTICE	53,000	16	63,000	92	75,000	26	81,000	16	65,933	150
GASTROENTEROLOGY	.	.	85,000	34	83,000	22	107,000	33	92,663	89
PREVENTIVE MED	.	.	88,000	18	67,000	6	83,000	9	82,818	33
GENERAL SURGERY	36,000	10	78,000	57	108,000	52	125,000	45	97,848	164
INTERNAL MEDICINE	39,000	140	65,000	544	81,000	366	100,000	394	76,084	1444
NEUROLOGY	44,000	15	58,000	74	80,000	50	94,000	62	73,532	201
NEUROSURGERY	.	.	86,000	15	118,000	14	142,000	18	116,979	47
OPHTHALMOLOGY	23,000	8	80,000	30	103,000	20	128,000	27	95,294	85
ORTHOPEDIC SURGERY	50,000	5	99,000	36	121,000	30	155,000	23	117,117	94
OTOLARYNGOLOGY	.	.	100,000	27	109,000	19	139,000	21	114,776	67
PSYCHIATRY	56,000	41	54,000	154	75,000	75	86,000	80	66,049	350
PUBLIC HEALTH	43,000	4	63,000	56	63,000	21	78,000	27	66,009	108
PHYSICAL MED & REHAB	30,000	5	90,000	17	114,000	6	.	.	84,429	28
PLASTIC SURGERY	.	.	80,000	9	109,000	8	153,000	6	109,130	23
PATHOLOGY	42,000	22	58,000	181	79,000	129	94,000	165	74,694	497
RADIOLOGY	37,000	50	86,000	142	112,000	80	134,000	64	94,042	336
UROLOGY	38,000	4	75,000	14	128,000	12	139,000	15	107,178	45
TOTAL	$ 46,565	382	$ 71,059	1729	$ 90,061	1057	$ 106,352	1112	$ 82,735	4280

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1985-86, Washington, D.C., Table 10, pp. 22-25.

TABLE A-15

AAMC MEDIAN SALARY BY FACULTY RANK
FACULTY RECEIVING BASE COMPONENT ONLY
1986

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 87,000	48	$ 100,000	137	$ 125,000	55	$ 134,000	41	$ 107,633	281
CARDIOLOGY	40,000	16	83,000	74	99,000	48	126,000	48	94,527	186
THOR & CARDIO SURG	.	.	130,000	13	158,000	14	183,000	14	157,659	41
DERMATOLOGY	.	.	68,000	32	86,000	16	100,000	15	80,190	63
FAMILY PRACTICE	56,000	17	66,000	74	74,000	28	87,000	10	68,047	129
GASTROENTEROLOGY	.	.	103,000	29	86,000	26	120,000	32	104,172	87
PREVENTIVE MED	.	.	84,000	18	70,000	8	82,000	13	80,462	39
GENERAL SURGERY	43,000	16	92,000	42	115,000	38	142,000	49	109,517	145
INTERNAL MEDICINE	41,000	150	69,000	574	84,000	370	103,000	412	79,198	1506
NEUROLOGY	39,000	20	68,000	79	85,000	49	106,000	57	79,800	205
NEUROSURGERY	.	.	91,000	18	122,000	11	171,000	16	127,022	45
OPHTHALMOLOGY	39,000	4	83,000	36	110,000	19	125,000	26	99,812	85
ORTHOPEDIC SURGERY	44,000	4	107,000	40	130,000	28	156,000	26	124,000	98
OTOLARYNGOLOGY	32,000	6	105,000	26	113,000	15	138,000	23	111,300	70
PSYCHIATRY	49,000	57	58,000	152	75,000	80	92,000	88	68,183	377
PUBLIC HEALTH	48,000	7	60,000	59	67,000	29	81,000	35	66,569	130
PHYSICAL MED & REHAB	.	.	84,000	20	118,000	6	.	.	91,846	26
PLASTIC SURGERY	36,000	4	90,000	10	138,000	8	160,000	7	112,690	29
PATHOLOGY	49,000	12	61,000	162	82,000	134	99,000	149	79,232	457
RADIOLOGY	35,000	60	88,000	155	118,000	83	138,000	84	97,188	382
UROLOGY	.	.	89,000	12	110,000	7	159,000	19	127,868	38
TOTAL	$ 47,200	421	$ 75,536	1762	$ 93,071	1072	$ 112,927	1164	$ 86,939	4419

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1986-87, Washington, D.C., Table 10, pp. 22-25.

TABLE A-16

AAMC MEDIAN SALARY BY FACULTY RANK
FACULTY RECEIVING BASE COMPONENT ONLY
1987

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 90,000	39	$ 104,000	159	$ 133,000	57	$ 148,000	40	$ 113,719	295
CARDIOLOGY	45,000	17	80,000	109	100,000	58	129,000	61	94,506	245
THOR & CARDIO SURG	.	.	150,000	18	169,000	8	220,000	15	179,317	41
DERMATOLOGY	.	.	67,000	39	91,000	18	104,000	14	80,380	71
FAMILY PRACTICE	57,000	11	65,000	86	78,000	36	95,000	21	71,358	154
GASTROENTEROLOGY	57,000	6	84,000	44	94,000	30	126,000	42	99,590	122
PREVENTIVE MED	.	.	58,000	12	70,000	5	75,000	11	66,821	28
GENERAL SURGERY	36,000	21	94,000	57	121,000	44	147,000	52	109,667	174
INTERNAL MEDICINE	45,000	136	73,000	596	90,000	357	110,000	431	84,979	1520
NEUROLOGY	40,000	18	68,000	77	93,000	55	105,000	61	82,825	211
NEUROSURGERY	.	.	110,000	11	156,000	10	195,000	11	153,594	32
OPHTHALMOLOGY	40,000	7	95,000	32	113,000	17	135,000	25	106,370	81
ORTHOPEDIC SURGERY	30,000	6	115,000	42	149,000	24	192,000	27	139,091	99
OTOLARYNGOLOGY	33,000	9	102,000	31	132,000	16	163,000	22	117,397	78
PSYCHIATRY	62,000	38	66,000	145	83,000	69	103,000	80	77,991	332
PUBLIC HEALTH	.	.	65,000	50	72,000	22	79,000	32	70,788	104
PHYSICAL MED & REHAB	54,000	4	123,000	25	123,000	8	.	.	115,541	37
PLASTIC SURGERY	52,000	4	100,000	13	150,000	5	200,000	7	126,138	29
PATHOLOGY	45,000	19	64,000	157	89,000	120	105,000	148	83,610	444
RADIOLOGY	50,000	38	94,000	148	125,000	80	156,000	82	110,931	348
UROLOGY	41,000	11	95,000	15	170,000	7	160,000	19	117,423	52
TOTAL	$ 50,997	384	$ 80,105	1866	$ 100,384	1046	$ 121,520	1201	$ 93,397	4497

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1987-88, Washington, D.C., Table 12, pp. 30-32.

TABLE A-17

AAMC MEDIAN SALARY BY FACULTY RANK
FACULTY RECEIVING BASE AND SUPPLEMENT COMPONENT
1985

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 86,000	137	$ 99,000	651	$ 120,000	226	$ 139,000	154	$ 106,746	1178
CARDIOLOGY	55,000	13	70,000	168	94,000	95	109,000	122	87,193	398
THOR & CARDIO SURG	.	.	110,000	47	162,000	48	191,000	51	155,390	146
DERMATOLOGY	53,000	8	78,000	47	87,000	36	106,000	31	86,131	122
FAMILY PRACTICE	53,000	23	64,000	256	80,000	122	87,000	58	70,608	459
GASTROENTEROLOGY	.	.	66,000	66	91,000	44	106,000	60	86,588	170
PREVENTIVE MEDICINE	.	.	70,000	15	85,000	6	75,000	10	74,516	31
GENERAL SURGERY	70,000	51	92,000	331	116,000	246	137,000	303	111,782	931
INTERNAL MEDICINE	50,000	195	65,000	1584	83,000	1036	98,000	1339	79,422	4154
NEUROLOGY	48,000	20	66,000	219	83,000	129	100,000	139	78,937	507
NEUROSURGERY	72,000	5	98,000	56	137,000	50	160,000	57	129,869	168
OPHTHALMOLOGY	60,000	7	87,000	112	121,000	91	142,000	87	112,892	297
ORTHOPEDIC SURGERY	91,000	12	100,000	135	125,000	89	148,000	84	119,216	320
OTOLARYNGOLOGY	69,000	4	93,000	47	125,000	38	133,000	33	113,000	122
PSYCHIATRY	54,000	67	65,000	486	81,000	316	97,000	344	77,636	1213
PUBLIC HEALTH	.	.	56,000	12	72,000	13	99,000	9	73,500	34
PHYSICAL MED & REHAB	68,000	25	73,000	51	88,000	29	110,000	20	81,400	125
PLASTIC SURGERY	.	.	102,000	37	133,000	21	154,000	22	124,438	80
PATHOLOGY	53,000	31	66,000	344	84,000	270	99,000	362	82,289	1007
RADIOLOGY	55,000	53	85,000	503	109,000	296	130,000	346	102,599	1198
UROLOGY	.	.	89,000	62	113,000	53	135,000	62	112,299	177
TOTAL	$ 62,126	651	$ 76,261	5239	$ 96,192	3254	$ 112,063	3693	$ 90,896	12837

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1985-86, Washington, D.C., Table 25, pp. 69-72.

TABLE A-18

AAMC MEDIAN SALARY BY FACULTY RANK
FACULTY RECEIVING BASE AND SUPPLEMENT COMPONENT
1986

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 90,000	160	$ 105,000	648	$ 127,000	234	$ 145,000	139	$ 112,584	1201
CARDIOLOGY	38,000	22	75,000	196	99,000	116	116,000	140	91,266	474
THOR & CARDIO SURG	68,000	4	115,000	60	171,000	39	186,000	52	151,697	155
DERMATOLOGY	.	.	75,000	59	98,000	39	112,000	37	91,785	13!
FAMILY PRACTICE	55,000	19	68,000	289	83,000	124	95,000	57	74,446	489
GASTROENTEROLOGY	.	.	69,000	68	95,000	62	108,000	75	91,132	205
PREVENTIVE MED	.	.	60,000	16	93,000	13	80,000	12	76,317	41
GENERAL SURGERY	70,000	56	95,000	387	124,000	253	147,000	324	117,338	1020
INTERNAL MEDICINE	51,000	230	67,000	1671	87,000	1092	103,000	1359	82,415	4352
NEUROLOGY	56,000	18	68,000	215	87,000	143	106,000	154	83,760	530
NEUROSURGERY	82,000	6	100,000	57	138,000	53	170,000	62	135,090	178
OPHTHALMOLOGY	50,000	5	92,000	121	129,000	86	154,000	98	121,187	310
ORTHOPEDIC SURGERY	72,000	13	108,000	138	135,000	84	156,000	92	127,009	327
OTOLARYNGOLOGY	60,000	6	94,000	70	130,000	49	144,000	38	115,227	163
PSYCHIATRY	62,000	74	68,000	508	86,000	319	103,000	358	82,160	1259
PUBLIC HEALTH	.	.	72,000	23	90,000	16	100,000	15	85,111	54
PHYSICAL MED & REHAB	65,000	23	80,000	61	93,000	24	116,000	13	83,595	121
PLASTIC SURGERY	.	.	107,000	38	140,000	23	154,000	22	128,602	83
PATHOLOGY	53,000	27	67,000	319	86,000	271	105,000	377	86,212	994
RADIOLOGY	50,000	88	89,000	485	116,000	294	138,000	323	106,087	1190
UROLOGY	90,000	5	95,000	59	122,000	50	148,000	66	121,794	180
TOTAL	$ 62,980	756	$ 79,504	5488	$ 101,021	3384	$ 118,489	3833	$ 95,086	13461

Notes: * Excludes Department Chairmen
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1986-87, Washington, D.C., Table 25, pp. 69-72.

TABLE A-19

AAMC MEDIAN SALARY BY FACULTY RANK
FACULTY RECEIVING BASE AND SUPPLEMENT COMPONENT
1987

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 93,000	173	$ 110,000	743	$ 135,000	236	$ 130,000	180	$ 117,872	1354
CARDIOLOGY	35,000	19	81,000	194	105,000	130	120,000	143	97,097	486
THOR & CARDIO SURG	200,000	5	125,000	69	193,000	45	218,000	52	173,368	171
DERMATOLOGY	53,000	5	78,000	67	97,000	32	121,000	38	93,414	162
FAMILY PRACTICE	56,000	28	70,000	315	86,000	162	102,000	57	77,160	562
GASTROENTEROLOGY	56,000	9	73,000	82	95,000	63	112,000	83	91,861	237
PREVENTIVE MED	.	.	57,000	14	83,000	12	82,000	11	72,865	37
GENERAL SURGERY	75,000	69	100,000	448	131,000	278	161,000	348	124,603	1143
INTERNAL MEDICINE	53,000	325	70,000	1847	90,000	1189	108,000	1449	85,243	4810
NEUROLOGY	53,000	21	70,000	229	91,000	160	108,000	157	85,818	567
NEUROSURGERY	120,000	7	114,000	74	159,000	56	183,000	73	150,186	210
OPHTHALMOLOGY	65,000	12	98,000	148	139,000	92	159,000	105	125,398	357
ORTHOPEDIC SURGERY	95,000	20	125,000	164	145,000	108	162,000	97	138,237	389
OTOLARYNGOLOGY	65,000	5	99,000	81	135,000	55	151,000	41	120,659	182
PSYCHIATRY	62,000	126	71,000	573	90,000	374	109,000	364	84,781	1437
PUBLIC HEALTH	59,000	10	78,000	29	93,000	21	104,000	19	85,835	79
PHYSICAL MED & REHAB	75,000	21	80,000	69	100,000	24	126,000	17	88,832	131
PLASTIC SURGERY	65,000	4	120,000	57	154,000	27	165,000	31	137,588	119
PATHOLOGY	52,000	17	70,000	343	90,000	306	110,000	416	90,752	1082
RADIOLOGY	60,000	96	95,000	598	124,000	319	149,000	373	113,783	1386
UROLOGY	50,000	9	97,000	78	138,000	58	154,000	74	125,187	219
TOTAL	$ 66,035	981	$ 84,450	6224	$ 106,387	3787	$ 125,771	4128	$ 100,031	15120

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1987-88, Washington, D.C., Table 27, pp. 76-79.

TABLE A-20

AAMC MEDIAN COMPENSATION BY FACULTY RANK
ALL FACULTY WITH M.D. DEGREE
1985

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 86,230	180	$ 99,000	771	$ 120,000	272	$ 136,537	190	$ 106,464	1413
CARDIOLOGY	45,500	32	73,086	243	95,432	148	110,481	162	87,586	585
THOR & CARDIO SURG	.	.	112,656	64	159,789	57	185,746	67	152,995	188
DERMATOLOGY	53,000	8	73,257	74	86,469	49	102,413	46	83,576	177
FAMILY PRACTICE	53,000	39	63,736	348	79,122	148	85,703	74	69,456	609
GASTROENTEROLOGY	.	.	72,460	100	88,333	66	106,355	93	88,676	259
PREVENTIVE MED	.	.	79,818	33	76,000	12	78,789	19	78,797	64
GENERAL SURGERY	64,426	61	89,743	388	114,604	298	135,448	348	109,695	1095
INTERNAL MEDICINE	45,403	335	65,000	2128	82,478	1402	98,455	1733	78,561	5598
NEUROLOGY	46,286	35	63,980	293	82,162	179	98,149	201	77,403	708
NEUROSURGERY	72,000	5	95,465	71	132,844	64	155,660	75	127,051	215
OPHTHALMOLOGY	40,267	15	85,521	142	117,757	111	138,684	114	108,976	382
ORTHOPEDIC SURGERY	78,941	17	99,789	171	123,992	119	149,505	107	118,739	414
OTOLARYNGOLOGY	69,000	4	95,554	74	119,667	57	135,333	54	113,630	189
PSYCHIATRY	54,759	108	62,353	640	79,849	391	94,925	424	75,041	1563
PUBLIC HEALTH	43,000	4	61,765	68	66,441	34	83,250	36	67,803	142
PHYSICAL MED & REHAB	61,667	30	77,250	68	92,457	35	110,000	20	81,954	153
PLASTIC SURGERY	.	.	97,696	46	126,379	29	153,786	28	121,019	103
PATHOLOGY	48,434	53	63,242	525	82,383	399	97,435	527	79,779	1504
RADIOLOGY	46,262	103	85,220	645	109,638	376	130,624	410	100,725	1534
UROLOGY	38,000	4	86,421	76	115,769	65	135,779	77	111,261	222
TOTAL	$ 56,372	1033	$ 74,970	6968	$ 96,689	4311	$ 110,762	4805	$ 88,856	17117

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1985-86, Washington, D.C.
Weighted Average of Tables V-1 and V-4.

TABLE A-21

AAMC MEDIAN COMPENSATION BY FACULTY RANK
ALL FACULTY WITH M.D. DEGREE
1986

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 89,308	208	$ 104,127	785	$ 126,619	289	$ 142,745	200	$ 111,645	1482
CARDIOLOGY	38,842	38	77,193	270	99,000	164	118,553	188	92,185	660
THOR & CARDIO SURG	68,000	4	117,671	73	167,566	53	185,364	66	152,944	196
DERMATOLOGY	.	.	72,538	91	94,509	55	108,538	52	88,096	198
FAMILY PRACTICE	55,472	36	67,592	363	81,342	152	93,806	67	73,110	618
GASTROENTEROLOGY	.	.	79,165	97	92,341	88	111,589	107	95,017	292
PREVENTIVE MED	.	.	72,706	34	84,238	21	81,040	25	78,338	80
GENERAL SURGERY	64,000	72	94,706	429	122,825	291	146,343	373	116,365	1165
INTERNAL MEDICINE	47,053	380	67,511	2245	86,241	1462	103,000	1771	81,588	5858
NEUROLOGY	47,053	38	68,000	294	86,490	192	106,000	211	82,656	735
NEUROSURGERY	82,000	6	97,840	75	135,250	64	170,205	78	133,462	223
OPHTHALMOLOGY	45,111	9	89,936	157	125,562	105	147,919	124	116,587	395
ORTHOPEDIC SURGERY	65,412	17	107,775	178	133,750	112	156,000	118	126,315	425
OTOLARYNGOLOGY	46,000	12	96,979	96	126,016	64	141,738	61	114,047	233
PSYCHIATRY	56,344	131	65,697	660	83,794	399	100,830	446	78,939	1636
PUBLIC HEALTH	48,000	7	63,366	82	75,178	45	86,700	50	72,011	184
PHYSICAL MED & REHAB	65,000	23	80,968	81	98,000	30	116,000	13	85,054	147
PLASTIC SURGERY	36,000	4	103,458	48	139,484	31	155,448	29	124,482	112
PATHOLOGY	51,769	39	64,979	481	84,677	405	103,300	526	84,014	1451
RADIOLOGY	43,919	148	88,758	640	116,440	377	138,000	407	103,924	1572
UROLOGY	90,000	5	93,986	71	120,526	57	150,459	85	122,853	218
TOTAL	$ 57,336	1177	$ 78,539	7250	$ 99,108	4456	$ 117,193	4997	$ 93,073	7880

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1986-87, Washington, D.C.
Weighted Average of Tables V-2 and V-5.

TABLE A-22

AAMC MEDIAN COMPENSATION BY FACULTY RANK
ALL FACULTY WITH M.D. DEGREE
1987

DEPARTMENT	INSTRUCTOR	COUNT	ASSISTANT PROFESSOR	COUNT	ASSOCIATE PROFESSOR	COUNT	PROFESSOR	COUNT	ALL FACULTY*	TOTAL
ANESTHESIOLOGY	$ 92,448	212	$ 108,945	904	$ 134,636	313	$ 149,636	220	$ 117,129	1649
CARDIOLOGY	39,722	36	80,640	303	103,457	188	122,691	204	96,228	731
THOR & CARDIO SURG	200,000	5	130,172	87	189,377	53	218,448	67	174,319	212
DERMATOLOGY	53,000	5	73,953	106	95,457	70	116,423	52	89,442	233
FAMILY PRACTICE	56,282	39	68,928	401	84,345	198	100,115	78	75,955	716
GASTROENTEROLOGY	56,400	15	76,841	126	94,677	93	116,704	125	94,487	359
PREVENTIVE MED	.	.	57,462	26	79,176	17	78,500	22	70,262	65
GENERAL SURGERY	65,900	90	99,323	505	129,634	322	159,180	400	122,629	1317
INTERNAL MEDICINE	50,640	461	70,732	2443	90,000	1546	108,459	1880	85,179	6330
NEUROLOGY	47,000	39	69,497	306	91,512	215	107,161	218	85,006	778
NEUROSURGERY	120,000	7	113,482	85	158,545	66	184,571	84	150,636	242
OPHTHALMOLOGY	55,789	19	97,467	180	134,945	109	154,385	130	121,879	438
ORTHOPEDIC SURGERY	80,000	26	122,961	206	145,727	132	168,532	124	138,410	488
OTOLARYNGOLOGY	44,429	14	99,830	112	134,324	71	155,190	63	119,681	260
PSYCHIATRY	62,000	164	69,990	718	88,910	443	107,919	444	83,507	1769
PUBLIC HEALTH	59,000	10	69,772	79	82,256	43	88,314	51	77,284	183
PHYSICAL MED & REHAB	71,640	25	91,436	94	105,750	32	126,000	17	94,714	168
PLASTIC SURGERY	58,500	8	116,286	70	133,375	32	171,447	38	135,345	148
PATHOLOGY	48,306	36	68,116	500	89,718	426	108,688	564	88,674	1526
RADIOLOGY	57,164	134	94,802	746	124,201	399	150,262	455	113,210	1734
UROLOGY	45,050	20	96,677	93	141,446	65	155,226	93	123,697	271
TOTAL	$ 61,804	1365	$ 83,448	8090	$ 105,088	4833	$ 124,813	5329	$ 98,510	19617

Notes: * Excludes Department Chairmen.
Excludes selected specialties with no corresponding match in the VA.

Source: AAMC Report on Medical School Faculty Salaries, 1987-88, Washington, D.C.
Weighted Average of Tables V-3 and V-6.

TABLE A-23

COMPARISON OF VA SALARIES TO NET INCOME
OF NON-FEDERAL, FULL-TIME PATIENT CARE PHYSICIANS
1985

SPECIALTY	SOURCE	MEAN	MEDIAN	STD DEV	COUNT
GENERAL/FAMILY PRACTICE	AMA	$ 79,549	$ 72,000	43,187	453
	VA	73,670	73,164	5,355	68
INTERNAL MEDICINE	AMA	104,611	90,000	73,059	465
	VA	75,897	77,025	8,726	1,864
SURGERY	AMA	159,496	132,000	107,500	545
	VA	79,810	82,258	7,981	427
RADIOLOGY	AMA	147,395	150,000	63,134	161
	VA	84,875	87,758	4,293	337
PSYCHIATRY	AMA	91,361	84,500	46,592	216
	VA	77,373	78,516	6,045	912
ANESTHESIOLOGY	AMA	144,135	130,000	67,034	152
	VA	81,774	83,081	7,276	135
PATHOLOGY	AMA	121,521	119,500	50,104	86
	VA	84,895	87,758	5,049	238
OTHER	AMA	107,528	96,000	62,960	292
	VA	80,326	82,758	9,077	383
TOTAL	AMA	116,966	140,168	.	2,370
	VA	78,308	80,259	8,252	4,364

Notes: VA salaries include base pay plus special pay for full-time, non-academic physicians.

Total AMA mean and median salaries are weighted averages.

Source: AMA, Department of Manpower and Demographic Studies.

TABLE A-24

COMPARISON OF VA SALARIES TO NET INCOME
OF NON-FEDERAL, FULL-TIME PATIENT CARE PHYSICIANS
1986

SPECIALTY	SOURCE	MEAN	MEDIAN	STD DEV	COUNT
GENERAL/FAMILY PRACTICE	AMA	$ 81,747	$ 75,000	46,877	445
	VA	74,123	73,839	4,958	76
INTERNAL MEDICINE	AMA	111,543	96,000	72,857	530
	VA	75,991	77,472	9,252	1,875
SURGERY	AMA	166,339	150,000	103,782	569
	VA	80,583	82,258	5,988	411
RADIOLOGY	AMA	169,206	160,000	73,688	179
	VA	85,187	87,758	4,373	325
PSYCHIATRY	AMA	96,982	85,000	42,883	204
	VA	77,635	78,774	6,145	879
ANESTHESIOLOGY	AMA	152,013	149,500	55,938	154
	VA	82,357	83,741	6,593	134
PATHOLOGY	AMA	142,790	131,000	62,186	103
	VA	85,035	87,758	4,402	238
OTHER	AMA	113,364	96,000	92,676	260
	VA	80,523	83,258	9,516	389
TOTAL	AMA	124,177	113,364	.	2,444
	VA	78,525	80,758	8,407	4,327

Notes: VA salaries include base pay plus special pay for full-time, non-academic physicians.

Total AMA mean and median salaries are weighted averages.

Source: AMA, Department of Manpower and Demographic Studies.

TABLE A-25

COMPARISON OF VA SALARIES TO NET INCOME
OF NON-FEDERAL, FULL-TIME PATIENT CARE PHYSICIANS
1987

SPECIALTY	SOURCE	MEAN	MEDIAN	STD DEV	COUNT
GENERAL/FAMILY PRACTICE	AMA	$ 91,696	$ 80,000	48,817	469
	VA	76,018	75,734	5,582	106
INTERNAL MEDICINE	AMA	124,620	100,000	87,579	542
	VA	78,019	79,706	9,799	1,902
SURGERY	AMA	193,025	164,000	138,810	550
	VA	83,121	84,294	5,637	395
RADIOLOGY	AMA	182,961	170,000	86,283	170
	VA	87,266	89,794	4,285	322
PSYCHIATRY	AMA	106,630	95,000	55,361	203
	VA	79,831	81,500	6,281	865
ANESTHESIOLOGY	AMA	164,620	160,000	61,842	148
	VA	85,455	86,206	5,820	141
PATHOLOGY	AMA	131,795	130,000	53,860	75
	VA	86,727	89,794	5,023	240
OTHER	AMA	119,023	102,000	69,702	231
	VA	82,199	85,294	11,590	382
TOTAL	AMA	136,764	120,225	.	2,388
	VA	80,565	83,115	8,914	4,353

Notes: VA salaries include base pay plus special pay for full-time, non-academic physicians.

Total AMA mean and median salaries are weighted averages.

Source: AMA, Department of Manpower and Demographic Studies.

TABLE A-26

BASE SALARY REGRESSION ESTIMATES
FULL-TIME PHYSICIANS
SPECIALIZED SURGERY
1987

YEARS	BASE SALARY	PCT MAX	TOTAL PAY	PCT MAX	TOTAL PAY BOARD CERT	PCT MAX
0	$ 58,144	80.2	$ 71,144	77.1	$ 76,022	82.3
2	59,832	82.5	73,832	80.0	78,710	85.3
4	61,370	84.6	75,370	81.6	80,248	86.9
6	62,760	86.6	77,760	84.2	82,638	89.5
8	64,001	88.3	80,001	86.7	84,879	91.9
10	65,093	89.8	81,093	87.8	85,971	93.1
12	66,037	91.1	82,037	88.9	86,915	94.1
14	66,832	92.2	82,832	89.7	87,710	95.0
16	67,478	93.1	83,478	90.4	88,356	95.7
18	67,976	93.8	83,976	91.0	88,854	96.2
20	68,325	94.2	84,325	91.3	89,203	96.6
22	68,525	94.5	84,525	91.6	89,403	96.8
24	68,577	94.6	84,577	91.6	89,455	96.9

Note: Base salary is the regression estimate for non-academic, full-time, special-pay eligible physicians. The maximum is $ 72,500. Total pay is base salary plus primary and incentive special pay. The maximum is $ 92,318. Total pay, board certified is total pay plus incentive special pay for Board Certification. The maximum is $ 92,318.

TABLE A-27

BASE SALARY REGRESSION ESTIMATES
FULL-TIME PHYSICIANS
GENERAL INTERNAL MEDICINE
1987

YEARS	BASE SALARY	PCT MAX	TOTAL PAY	PCT MAX	TOTAL PAY BOARD CERT	PCT MAX
0	$ 56,416	77.8	$ 69,416	75.2	$ 74,294	80.5
2	58,103	80.1	72,103	78.1	76,981	83.4
4	59,642	82.3	73,642	79.8	78,520	85.1
6	61,031	84.2	76,031	82.4	80,909	87.6
8	62,272	85.9	78,272	84.8	83,150	90.1
10	63,365	87.4	79,365	86.0	84,243	91.3
12	64,308	88.7	80,308	87.0	85,186	92.3
14	65,103	89.8	81,103	87.9	85,981	93.1
16	65,750	90.7	81,750	88.6	86,628	93.8
18	66,247	91.4	82,247	89.1	87,125	94.4
20	66,596	91.9	82,596	89.5	87,474	94.8
22	66,797	92.1	82,797	89.7	87,675	95.0
24	66,848	92.2	82,848	89.7	87,726	95.0

Note: Base salary is the regression estimate for non-academic, full-time, special-pay eligible physicians. The maximum is $ 72,500. Total pay is base salary plus primary and incentive special pay. The maximum is $ 92,318. Total pay, board certified is total pay plus incentive special pay for Board Certification. The maximum is $ 92,318.

TABLE A-28

AVERAGE MILITARY PHYSICIAN COMPENSATION
1987

YEARS OF ACTIVE SERVICE	RMC 0-4	RMC 0-5	RMC 0-6	VSP	BCP	ASP	TOTAL PAY 0-4	TOTAL PAY 0-5	TOTAL PAY 0-6
10	43580	46067	52894	9000	2500	10000	$ 65,080	$ 67,567	$ 74,394
12	45641	48132	51663	8000	3000	10000	66,641	69,132	72,663
14	47412	50839	53176	7000	5000	10000	69,412	72,839	75,176
16	49169	53945	59769	7000	5000	10000	71,169	75,945	81,769
18	50313	56387	62315	6000	5000	10000	71,313	77,387	83,315
20	.	57757	63436	6000	5000	10000	.	78,757	84,436
22	.	59397	66518	5000	5000	10000	.	79,397	86,518
26	.	.	71224	5000	5000	10000	.	.	91,224

Note: Regular military compensation (RMC) is the sum basic pay, basic allowance quarters and subsistence, and the Federal tax advantage. Physician Special Pay includes variable special pay (VSP), Board Certified Pay (BCP), and additional special pay (ASP). Incentive Special Pay is available and varies by specialty. ISP is not included above.

Source: DOD, Selected Military Compensation Tables, 1987 Pay Rates.

TABLE A-29

MEDIAN SALARIES
FULL-TIME VA DENTISTS
1985, 1986, 1987

	1985 BASE SALARY	1985 TOTAL PAY	1985 TOTAL COMP	COUNT	1986 BASE SALARY	1986 TOTAL PAY	1986 TOTAL COMP	COUNT	1987 BASE SALARY	1987 TOTAL PAY	1987 TOTAL COMP	COUNT
All VA Dentists	$ 62,714	$ 67,624	$ 67,624	836	$ 64,456	$ 68,024	$ 68,699	832	$ 66,388	$ 70,683	$ 70,683	831
Non-Academic Dentists	60,972	65,215	65,215	606	60,972	65,746	66,222	612	64,594	68,889	68,889	617
ACADEMIC RANK												
Professor	67,940	71,508	71,508	8	67,940	71,508	73,500	6	69,976	73,544	75,123	6
Clinical Professor	67,940	73,383	73,383	4	67,940	73,383	78,938	4	69,976	75,419	81,460	4
Associate Professor	67,940	71,508	71,508	13	67,940	71,641	74,318	12	69,976	73,706	75,500	12
Assoc. Clin. Prof.	67,940	75,258	75,258	10	67,940	75,258	75,258	9	69,976	77,294	77,294	9
Assistant Professor	67,940	71,391	71,391	46	66,198	70,441	71,508	48	69,976	73,544	73,544	46
Asst. Clin. Prof.	67,940	70,441	70,441	36	67,940	70,441	70,441	34	69,976	72,477	72,477	30
Instructor	61,843	66,118	66,118	22	63,585	67,828	69,395	22	64,594	68,889	68,889	22
Clinical Instructor	67,940	70,441	70,441	64	67,940	70,441	71,508	58	69,976	72,477	73,544	57
Lecturer	67,940	75,008	75,008	6	67,940	74,758	74,758	7	69,976	76,794	76,794	7
Other Titles	67,940	70,441	70,441	21	67,940	70,441	70,975	20	69,976	72,477	72,477	21
SPECIALTY CATEGORY												
Special Dentistry	67,940	71,508	71,508	243	67,940	71,508	73,516	276	69,976	73,544	75,334	280
General Dentistry	62,714	65,215	65,215	593	62,714	65,241	65,275	556	64,594	67,256	68,302	551

Note: Total Pay is the sum of base pay and special pay. Total Compensation is the sum of Total Pay and any outside remuneration.

Source: PAID Master Files for December 1985, 1986, 1987.

TABLE A-30

BASE SALARY REGRESSION ESTIMATES
FULL-TIME, SPECIALIZED DENTISTRY
1987

YRS	BASE SALARY	PCT MAX	TOTAL PAY	PCT MAX
0	46,044	63.5	49,544	62.1
2	49,894	68.8	53,894	67.5
4	53,423	73.7	57,423	71.9
6	56,633	78.1	60,633	76.0
8	59,521	82.1	64,021	80.2
10	62,090	85.6	66,590	83.4
12	64,338	88.7	68,838	86.2
14	66,265	91.4	70,765	88.7
16	67,872	93.6	72,372	90.7
18	69,159	95.4	73,659	92.3
20	70,125	96.7	74,625	93.5
22	70,771	97.6	75,271	94.3
24	71,097	98.1	75,597	94.7

Note: Base salary is the regression estimate for non-academic, full-time dentists. Total pay is base salary plus primary special pay and incentive special pay. The maximum total pay is $79,818.

TABLE A-31

BASE SALARY REGRESSION ESTIMATES
FULL-TIME, GENERAL DENTISTRY
1987

YRS	BASE SALARY	PCT MAX	TOTAL PAY	PCT MAX
0	43,030	63.5	46,530	62.1
2	46,880	68.8	50,880	67.5
4	50,409	73.7	54,409	71.9
6	53,618	78.1	57,618	76.0
8	56,507	82.1	61,007	80.2
10	59,076	85.6	63,576	83.4
12	61,324	88.7	65,824	86.2
14	63,251	91.4	67,751	88.7
16	64,858	93.6	69,358	90.7
18	66,145	95.4	70,645	92.3
20	67,111	96.7	71,611	93.5
22	67,757	97.6	72,257	94.3
24	68,083	98.1	72,583	94.7

Note: Base salary is the regression estimate for non-academic, full-time dentists. Total pay is base salary plus primary special pay and incentive special pay. The maximum total pay is $79,818.